FUJIFILM

FCR 5000 plus

Operation Manual

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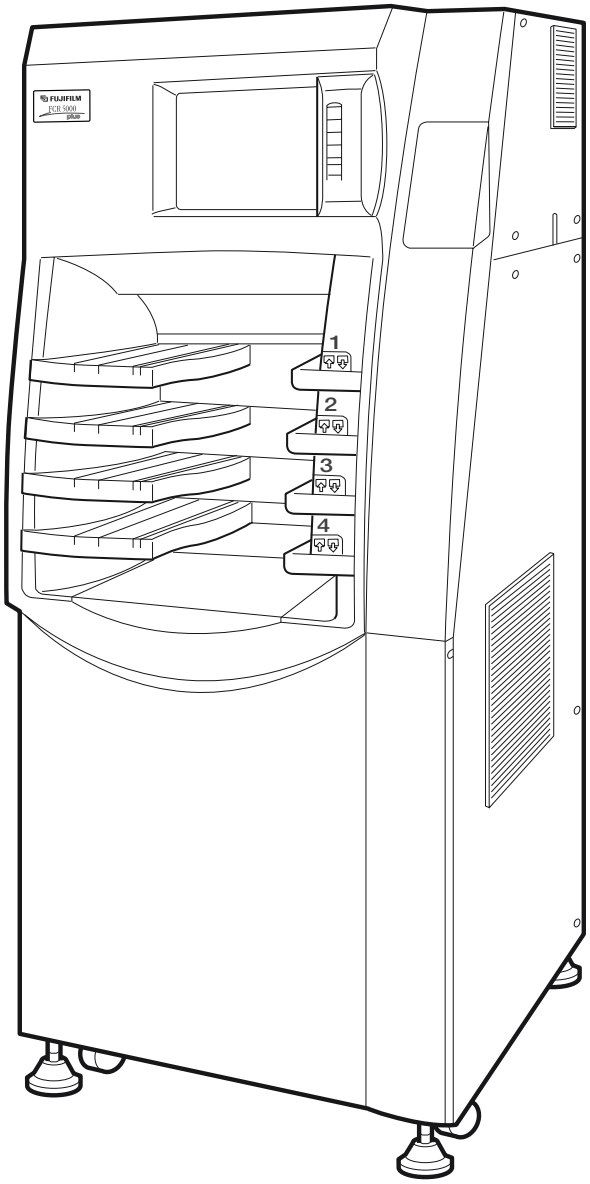
U.S. Version



Fuji Photo Film Co., Ltd.

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Foreword

NOTE: Please note that the "FCR 5000 plus" and the "CR-IR341P" are one and the same equipment.

Thank you for purchasing the FUJIFILM FCR 5000 plus.
The FUJI Computed Radiography FCR 5000 plus performs Digital Radiography by using an Imaging Plate (IP) as the X-ray detection device. It reads and processes X-ray image information that is recorded on an exposed IP using a cassette-type X-ray stand and can also print out hard copies on film.

The "FUJIFILM FCR 5000 plus Operation Manual" (this manual, hereinafter) describes in detail operation methods and usage precautions so that FCR 5000 plus functions can be used correctly and more efficiently.
First-time users of this system should first read this manual thoroughly and then store it near the device and refer to it regularly for optimum use of the system.

Installation may only be conducted by authorized service personal.

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This system is classified as a medical device under EC Directive 93/42/EEC.

It has been designed for operation by medical personnel who have undergone the proper training and under whose direction patients will come in contact with it.

Process waste correctly, as stipulated by local law or any regulations that apply.

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Maintenance and Inspection

Chapter **1**

Introduction

1.1 Features of the FCR 5000 plus

The FUJI Computed Radiography System FCR 5000 plus performs Digital Radiography by using an Imaging Plate (IP) as the X-ray detection device. It reads and processes X-ray image information that is recorded on an IP exposed using a cassette-type X-ray stand and can also print out hard copies on film using the connected image recorder.

This system provides chest, abdomen, bone, spine, head and other plain X-ray imaging, as well as spinal canal, bronchial tube, urinary organ, and other contrast medium X-ray imaging and X-ray tomography.

1 Due to the effects of digital image processing, the system produces radiographs that have a high diagnostic value and are easy to observe.

2 The system has a wide latitude for incident X-rays so that a large amount of X-ray diagnostic information is obtained.

3 The system has high sensitivity, resulting in a decrease in the X-ray radiation dose to the patients.

4 As the system has a wide latitude and an automatic sensitivity adjustment function, its radiographs are not affected by small changes in X-ray exposure conditions. Therefore, consistent image density is obtained for all radiographs.

5 Image processing parameters are automatically selected at the CR Console or the ID Terminal.

6 The system has four setting units into which up to four cassettes can be inserted at one time, making it possible to continuously process images and to rationalize processing work.

7 The automatic feed/load mechanism results in more efficient operation.

8 It is possible to connect the system to the FCR Data Management System (Optical Disc Image Filing Unit, CRT Image Console).

1.2 Operational Precautions

1.2.1 Laser Handling Precautions

FCR 5000 plus Laser Unit Specifications	
Class	IIIb
Medium	Semiconductor laser
Wavelength	660 nm
Maximum Output	60 mW (CW)

WARNING: The FCR 5000 plus incorporates a Class IIIb laser with maximum output of 60mW. To prevent exposure to its laser beams, observe the following precautions.
- Never open or remove the protective covers.
- Always contact a qualified service engineer immediately if you suspect there is a malfunction.

CAUTION: Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

1.2.2 Preventing Electric Shock

WARNING: High voltage is supplied to the photomultiplier.
To prevent electric shock, please observe the following precaution.
- Never remove the protective covers from the unit.

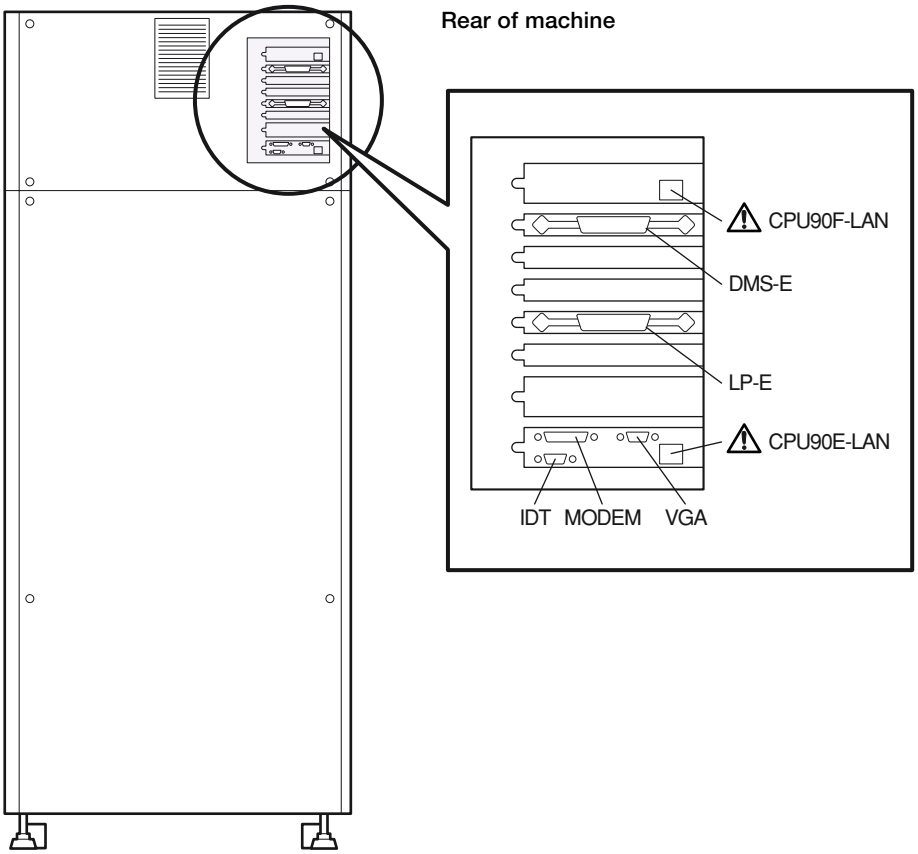
WARNING: The power supply to the unit is AC 120-240 V. To prevent electric shock, please observe the following precautions.
- Avoid installation sites where the equipment will be exposed to water.
- Always ground the equipment to a protective earth line.
- Make sure that all connections are secure and connected correctly.

1.2.3 Electromagnetic Compatibility (EMC)

The FCR5000 plus system complies with the standards for EMC that are applied in various countries as follows.
- IEC60601-1-2: 1993 (Japan)
- FCC Rules Part 15, Class A (USA)
- EN60601-1-2 (Europe)

WARNING: Electromagnetic wave-sensitive parts, such as the FDD, HDD, photo-multiplier, etc., are used in this equipment.
Do not place any objects that emit strong electromagnetic waves near the equipment.

1.2.4 Signal Input and Output Parts



CPU90F - LAN : Connected to the image network devices. 10base-T/100base-TX interface
DMS-E : FUJI's dedicated interface. Connected to the image display and filing devices.
LP-E : FUJI's dedicated interface. Connected to the image printer devices.
CPU90E - LAN : Connected to the ID network devices. 10base-T interface
VGA : Connected to the image monitors. VGA interface
MODEM : MODEM interface for service operations.
IDT : FUJI's dedicated interface. Connected to the ID terminal devices.

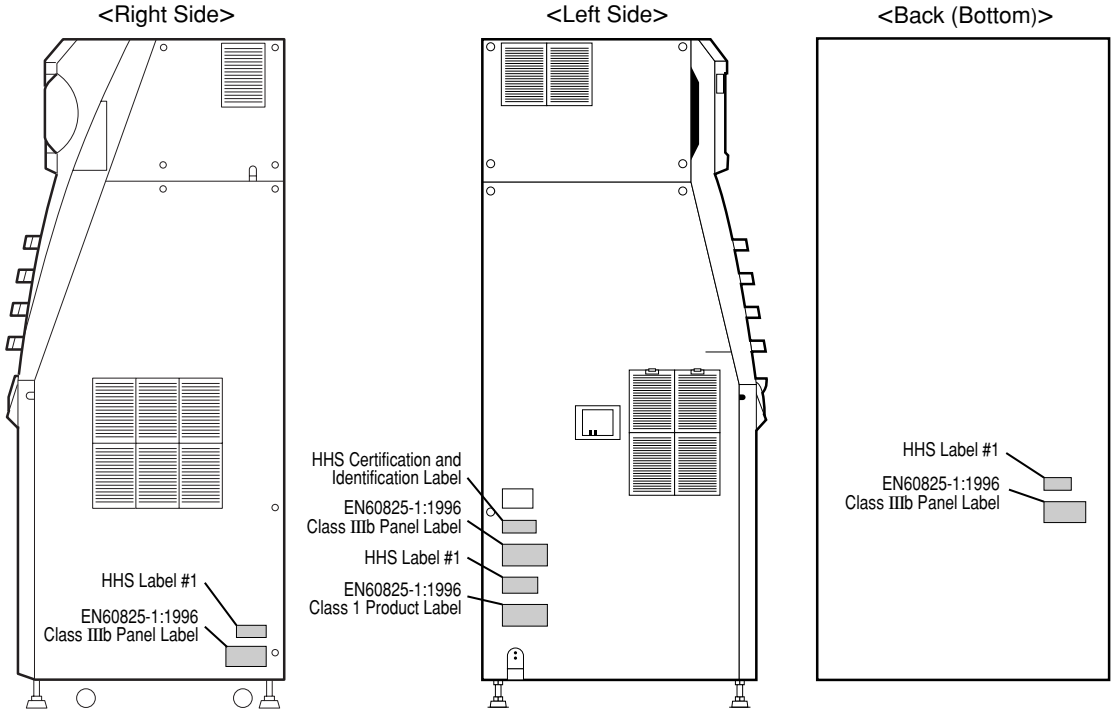
* Service engineers take responsibility for connections of these devices.

1.2.5 Usage Precautions

We ask that you heed these usage precautions and use the equipment correctly.

1. This equipment should be used only by people who have the proper skills.
2. Heed the following precautions when installing the equipment.
  2-1. Install the equipment where water will not splash it.
  2-2. Install the equipment where it will not be adversely affected by air pressure, temperature, humidity, ventilation, sunlight, dust or the presence of salt, sulfur or like substances in the atmosphere.
  2-3. Make sure the equipment will remain in stable condition, kept level and not subjected to vibration or shock.
  2-4. Do not install the equipment in places where chemicals are stored or gases emitted.
  2-5. Make sure that the power frequency, voltage and power consumption are appropriate.
  2-6. Connect the ground wire correctly.
3. Observe the following precautions before beginning to use the device.
  3-1. Inspect the switch contacts, polarities, dial settings and meters and confirm that the equipment is functioning properly.
  3-2. Confirm that the ground wire has been completely connected.
  3-3. Make sure that all cords have been connected properly and safely.
  3-4. Be aware that correct diagnosis can be hindered and danger can result from using different pieces of equipment together .
4. Heed the following precautions after using the equipment.
  4-1. Using the established procedure, restore the operation switches, dials, etc., to what they were prior to use and then turn the power off.
  4-2. When unplugging cords, do not pull on the body of the cord itself or apply unnecessary force.
  4-3. After using the accessories, recollect them and put them back in order.
5. If there is trouble with the equipment, do not attempt to fix it randomly. Instead, do what is indicated and entrust repairs to a professional.
6. Do not remodel the equipment.
7. Maintenance and Inspection
  7-1. Make inspect the equipment and parts periodically.
  7-2. If the equipment has not been used for a long time, make sure that it operates normally and safely prior to using it again.
8. Other Items
  8-1. When subjecting patients (particularly infants and pregnant women) to radiation, make sure not to exceed the necessary time and dose. Also, ensure that radiation is contained within the region for exposure.
  8-2. For cleaning and disinfecting the parts that patients come in contact with in a normal usage environment, slightly moisten a soft cloth (non-woven cloth: Kimwipe(r)) in neutral detergent or ethanol anhydride and wipe away any dirt. Do not use any other cleansers or disinfectants. Also, do not scrub the equipment's surface vigorously.
  8-3. Follow the Operation Manual and operate the equipment correctly.

1.2.6 Location of HHS Labels



FUJI PHOTO FILM CO., LTD.
26-30, NISHIAZABU 2-CHOME, MINATO-KU,
TOKYO 106, JAPAN

MODEL **CR-IR 341P**
SERIAL No.
MANUFACTURED
FPE

This product complies with
21 CFR Chapter 1. Subchapter J.

HHS Certification and Identification Label

Manufacturer **FUJI PHOTO FILM CO., LTD.**
26-30, NISHIAZABU 2-CHOME, MINATO-KU,
TOKYO 106-8620, JAPAN

FUJI COMPUTED RADIOGRAPHY
MODEL **CR-IR 341P**

50-60Hz
120-240V～
6.7-3.3A

E174968
I.T.E
LISTED
98PJ

SN

405N2895

Rating Label

DANGER
Laser radiation when open
AVOID DIRECT EXPOSURE TO BEAM

HHS Label #1

クラス 1 レーザ製品
CLASS 1 LASER PRODUCT
LASER KLASSE 1
APPAREIL A LASER DE CLASSE 1
PRODOTTO LASER DI CLASSE 1
PRODUCTO LASER DE CLASE 1
KLASS 1 LASERPRODUKT
KLASSE 1 LASERPRODUKT
클래스 1 레이저 제품
EN60825-1:1996

EN60825-1:1996
Class 1 Product Label

注意 — ここを開くとレーザ光が出ます。
ビームを直接見たり、触れたりしないでください。
CAUTION — LASER RADIATION WHEN OPEN
AVOID EXPOSURE TO BEAM.
VORSICHT! — LASERSTRAHLUNG.
WENN ABDECKUNG GEÖFFNET
NICHT DEM STRAHL AUSSETZEN.
ATTENTION — RAYONNEMENT LASER EN CAS
D'OUVERTURE
EXPOSITION DANGEREUSE AU FAISCEAU.
ATTENZIONE — RAGGIO LASER IN CASO DI
APERTURA NON ESPORSI AL RAGGIO.
PRECAUCION — RADIACION LASER EN CASO DE APERTURA
EVITAR LA EXPOSICION A LOS RAYOS.
OBSERVERA — LASERSTRÅLNING OM ÖPPNAD
UNDVIK ATT UTSÄTTA DIG FÖR STRÅLEN.
FORSIGTIG — LASERUDSTRÅLING VED ÅBNING
UNDGÅ UDSÆTTELSE FOR STRÅLEN.
ADVARSEL — LASERSTRÅLER UTGÅR HVIS ÅPNES
UNGÅ EKSPONERING AV STRÅLEN.
주의 — 이곳을 열면 레이저 광선이 나옵니다.
빔을 직접 보거나 접촉하지 마십시오.

EN60825-1:1996
Class IIIb Panel Label

1.3 Safety Precautions

This section contains safety precautions required for the safe operation of this equipment. Carefully read and follow these precautions before using the equipment.

If these precautions are not followed, injury or damage to the equipment may occur. Safety precautions are marked as WARNING or CAUTION and additional information as " !! ". The meanings of these precautions are as follows:

WARNING: Indicates hazardous situations that may lead to serious injuries or even death if the precaution is not or cannot be followed.

CAUTION: Indicates hazardous situations that may lead to mild or moderate injuries if the precaution is not or cannot be followed. Precautions against accidents causing only physical damage.

!! Indicates procedures requiring special attention, instructions that must be followed, supplementary explanations, etc.

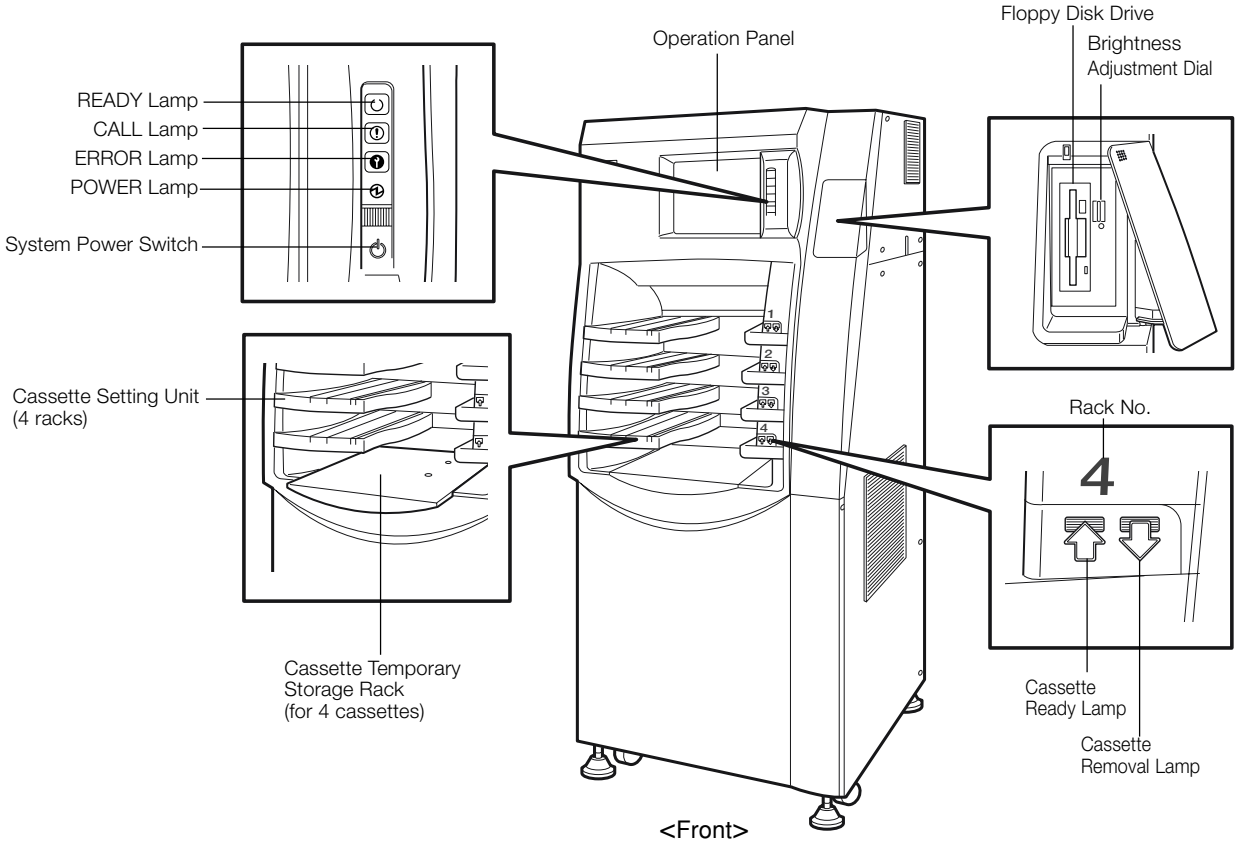
The institution where the equipment is installed is responsible for its use and maintenance. In addition, this equipment should not be used by persons other than doctors or suitably trained staff.

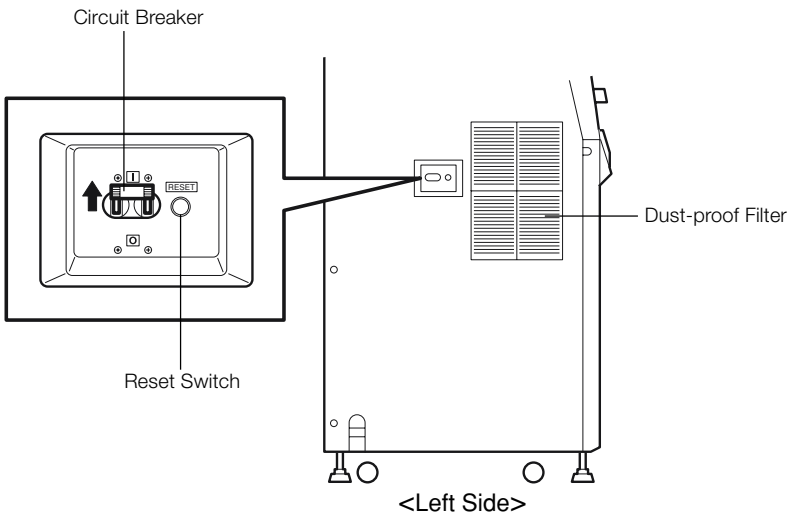
1.4 Hardware Configuration

1.4.1 Unit Names and Functions

The external view of the FCR 5000 plus and the names of each component are shown below.

[Fig. 1.1] FCR 5000 plus <External View and Component Names>





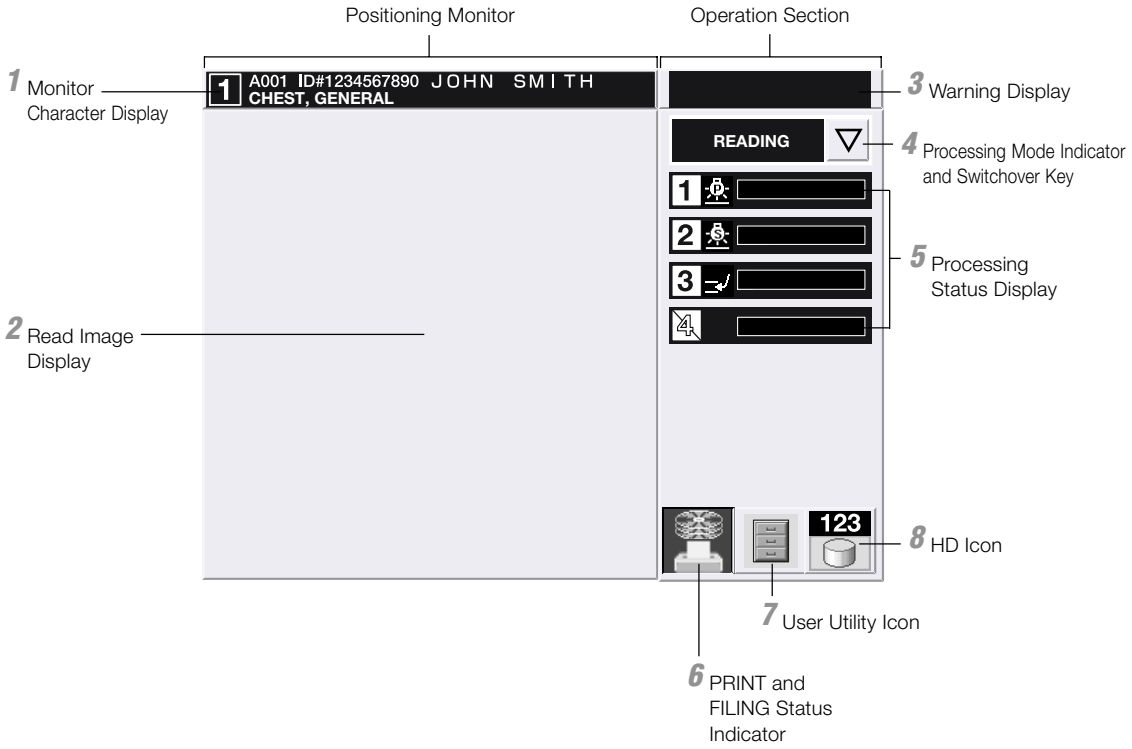
[Table 1-1] FCR 5000 plus Component Names and Functions

Name	Function
Operation Panel	Operation panel for the FCR 5000 plus. Configured such that on the monitor for confirming read images is displayed on the left side and the touch-panel-type operation part is on the right side. See next page for details.
Floppy Disk Drive	Do not use because the drive is exclusively for service engineers.
Brightness Adjustment Dial	Used to adjust display brightness as desired. Turn upward to increase brightness and downward to decrease.
READY Lamp	Lights green when initialization processing, etc., has been completed after power has been turned ON and the device starts up normally, indicating that cassette processing is now possible.
CALL Lamp	When the CALL Lamp lights (yellow), an alarm will sound and a pop-up window will appear on the screen. Do as the message in the window instructs. When the pop-up window is closed, the CALL Lamp will go off.
ERROR Lamp	When the ERROR Lamp lights (orange), a critical error has occurred. An alarm will sound and a pop-up window will appear on the screen. Do as the message in the window instructs. The ERROR Lamp will remain lit for as long as device power remains on.
POWER Lamp	Lights (green) when circuit breaker has been set to the "I" side and the power is turned ON. As the circuit breaker is normally left ON, the POWER Lamp will also normally be lit.
System Power Switch	Power switch for this device. This device has been provided with the system power switch and when the switch is pressed while the circuit breaker is ON status, power turns ON.
Cassette Setting Unit (4 racks)	For setting cassettes containing exposed IPs. Cassettes can be inserted in empty racks.
Cassette Ready Lamp	Lights (green) when the device has started up normally, indicating that cassettes can be inserted. Cassettes cannot be inserted when lamp is off.
Cassette Removal Lamp	Lights (green) when the processed cassette can be removed.
Cassette Temporary Storage Rack (for 4 cassettes)	Up to four cassettes can be temporarily placed here prior to insertion or following processing.
Dust-proof Filter	Installed at the inlet of the ventilation fan.
Reset Switch	Used only to reboot the FCR 5000 plus. Used in error recovery, but under normal conditions, do not press it.
Circuit Breaker	Leave it turned ON.

1.4.2 Operation Panel

The operation panel is divided into two parts: the left side is a monitor for positioning images and the right side is for operations. Configuration is as follows.

[Fig. 1.2] Operation Panel Configuration



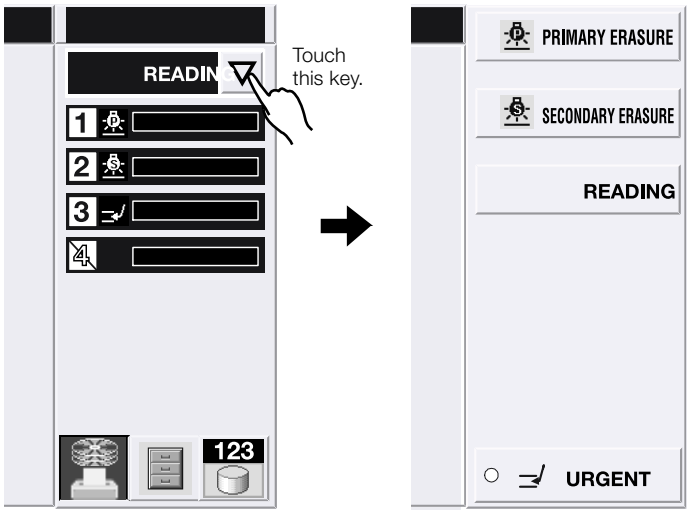
【Table 1-2】 Operation Panel Component Names and Functions (Left side: for Positioning Monitor)

Name	Function
1 **Monitor Character Display**	Displays character informations such as rack no., image no., patient name and menu name.
2 **Read Image Display**	Displays images immediately after reading.

[Table 1-3] Operation Panel Component Names and Functions (Right side: for Operations)

Name	Function
3 **Warning Display**	Blinks to indicate warning message. Contact your service engineer as necessary.
4 **Processing Mode Indicator and Switchover Key**	The processing this device conducts has been divided into the following four modes. The default setting is Reading Mode. (1) Reading Mode ➡ Routine Reading Mode. See page 2-5. (2) Primary Erasure Mode ➡ See page 2-13. (3) Secondary Erasure Mode ➡ See page 2-12. (4) Urgent Processing Mode ➡ See page 2-11. The currently set processing mode will be displayed. In addition, when the ▽ key on the right (switchover key) is touched, the operation section (right) will change to the processing selection screen as follows.

Processing Selection Screen

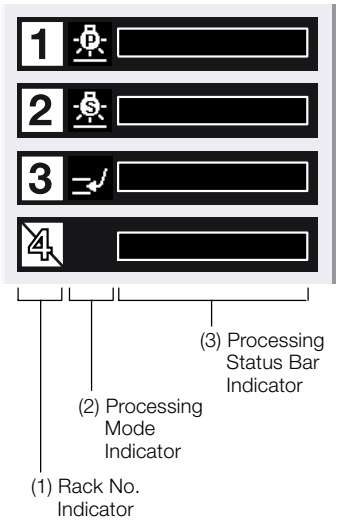


Here, if the keys for either Reading, Primary Erasure or Secondary Erasure are touched, the display will return to the original screen. (The set mode will be displayed.)
Urgent processing is selected by touching the Urgent key. Each time the Urgent key is touched, it will switch between being lit and going off. When ◉ is lit, selection is ON; when it is ◯, selection is OFF. Only at the time of selecting Urgent mode, touch the READNG key and return to the original screen.

// When Urgent, Primary Erasure and Secondary Erasure are specified, at the stage when the cassette is inserted, the settings for that IP will be taken as completed, and the setting (indicator) will return to the default, Reading. In other words, these settings are valid for only one time.

[Table 1-3] Continued

Name	Function
5 **Processing Status Display**	The processing status display is composed of the following.



(1) Rack No. Indicator
Rack no. and the status for that rack is displayed. When rack abnormality prohibits use, the rack no. will be displayed with a diagonal line across it (as illustrated below), indicating that the rack cannot be used. In this case, contact your service engineer.

(2) Processing Mode Indicators
Displays icon for the specified processing mode after cassette is inserted. Meanings of icons are as follows.

No indicator : Reading mode

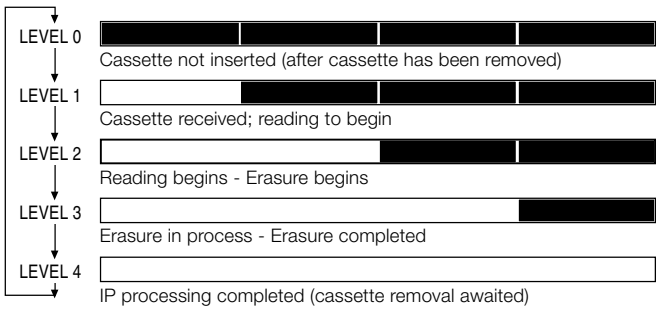
: Primary Erasure mode

: Secondary Erasure mode

: Urgent Processing mode

(3) Processing Status Bar Indicator
Displays IP processing status from after cassette has been inserted until it can be removed. Bar is divided into 4 blocks to signify progression status, with divisions displayed white.

Refer to the following illustration for supplementary explanation.

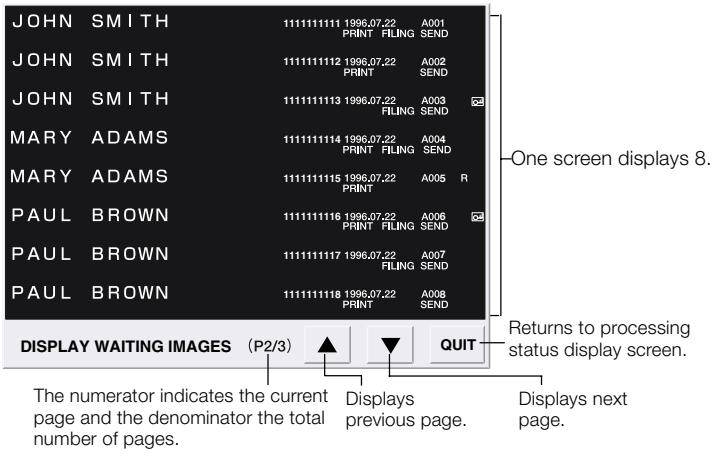

LEVEL 0
Cassette not inserted (after cassette has been removed)
LEVEL 1
Cassette received; reading to begin
LEVEL 2
Reading begins - Erasure begins
LEVEL 3
Erasure in process - Erasure completed
LEVEL 4
IP processing completed (cassette removal awaited)

// The status in the transition from LEVEL 0 to LEVEL 1 is also divided into quarters, and the length of the portion displayed in white will differ depending on the processing status of cassettes set in other racks.

[Table 1-3] Continued

Name	Function
6 **PRINT, FILING status indicator**	Displays the status of the printer and/or image filing unit connected to this device. When the icon is displayed, the connected devices are operating normally and image data transmission is possible. If the icon is not displayed, printer and/or image filing unit are not connected.
7 **User Utility Icon**	When this icon is touched, it is possible to enter User Utility mode. See **Chapter 3 User Utility** for detailed explanations and operation methods.
8 **HD Icon**	When this icon is touched, a list of images on the hard disk that are awaiting processing (including images awaiting reprinting) will be displayed. The number displayed inside the icon signifies the number of images awaiting processing.

!! "Images awaiting processing" imply images that have not yet been output to the specified destination.


JOHN SMITH 1111111111 1996.07.22 PRINT FILING A001 SEND
JOHN SMITH 1111111112 1996.07.22 PRINT A002 SEND
JOHN SMITH 1111111113 1996.07.22 FILING A003 SEND
MARY ADAMS 1111111114 1996.07.22 PRINT FILING A004 SEND
MARY ADAMS 1111111115 1996.07.22 PRINT A005 R
PAUL BROWN 1111111116 1996.07.22 PRINT FILING A006 SEND
PAUL BROWN 1111111117 1996.07.22 FILING A007 SEND
PAUL BROWN 1111111118 1996.07.22 PRINT A008 SEND
One screen displays 8.
DISPLAY WAITING IMAGES (P2/3)
QUIT
Returns to processing status display screen.
The numerator indicates the current page and the denominator the total number of pages.
Displays previous page.
Displays next page.

Display format is as follows.

- Patient's name
- Patient ID
- Date of exposure
- System ID + image no.
  System ID will differ with the setting made at time of installation. This image no. is displayed as a continuous, 3-digit number (001-999) for the cassettes inserted in the device that day.
- Image lock status
  Image lock specified : Images that have been subjected image lock. (Concerning image lock, refer to **Chapter 3 3.4 REOUTPUT IMAGE.**)

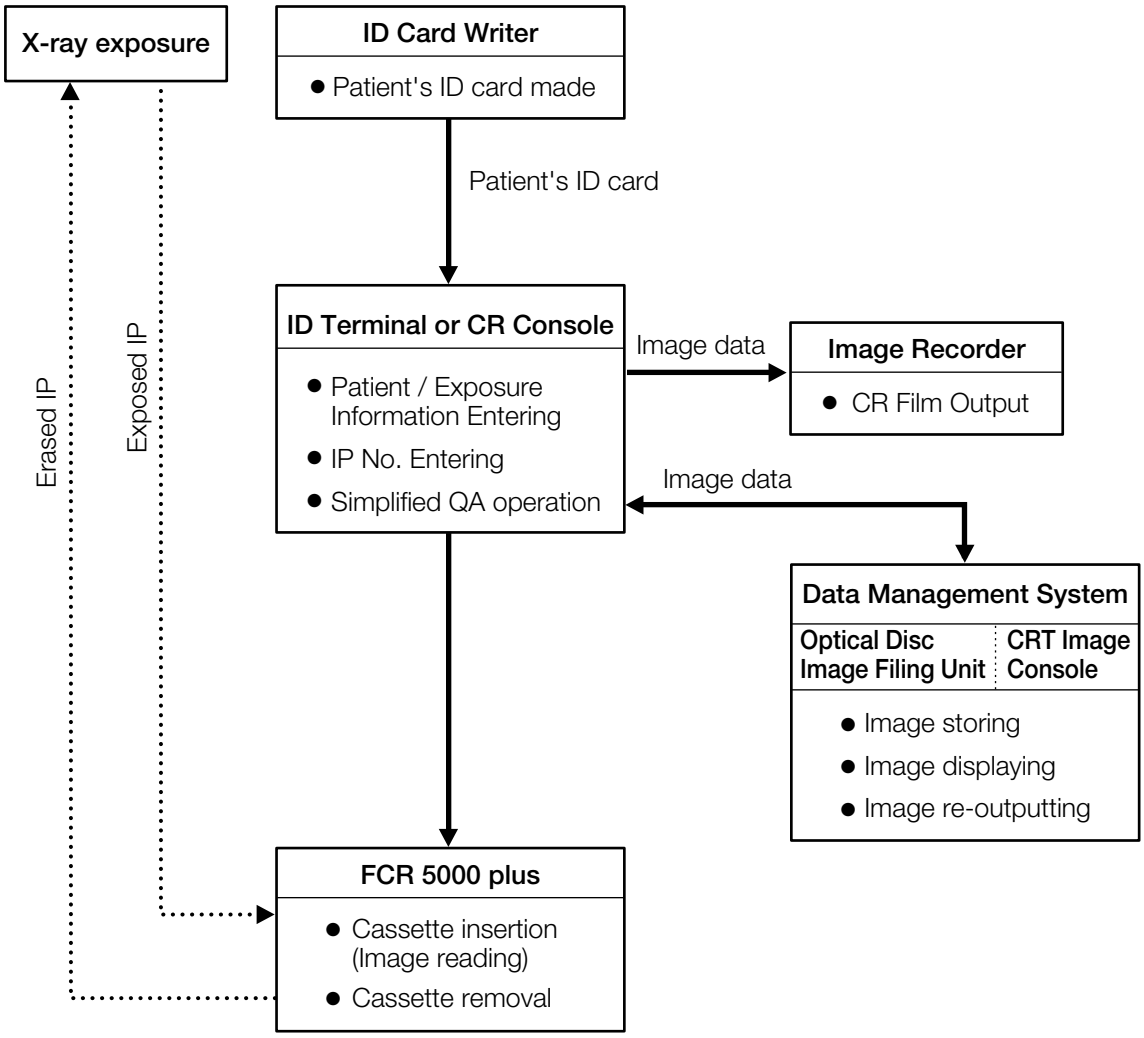
  No indication : Images to which image lock has not been specified. When these images are selected to be deleted or actually output, the list of images awaiting processing will exclude those images.

- Image output attribute indicators
  Indicates destination for output of images awaiting processing.
  PRINT : Film not yet output.
  FILING : Image not yet output to destination for filings.
  SEND : Image not yet output to other destinations (HIC or destinations specified for distribution)
  R : The image no, followed by the "R" indicates that it is the image awaiting processing for image reprinting.

1.5 Routine Operation Flowchart

The routine operation flowchart for the FCR 5000 plus system is as follows.

[Fig. 1.3] Routine Operation Flowchart



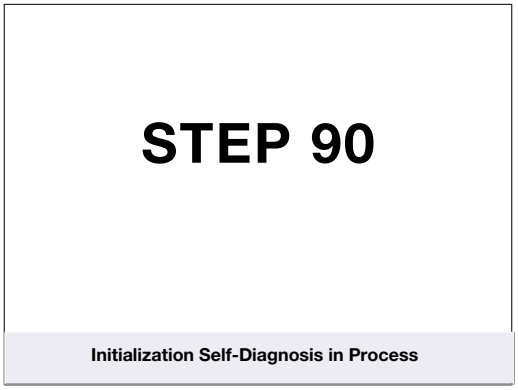
1.6 Operation Panel Screen Display for Each Scenario

1.6.1 Screens from Power ON to Processing Status Display

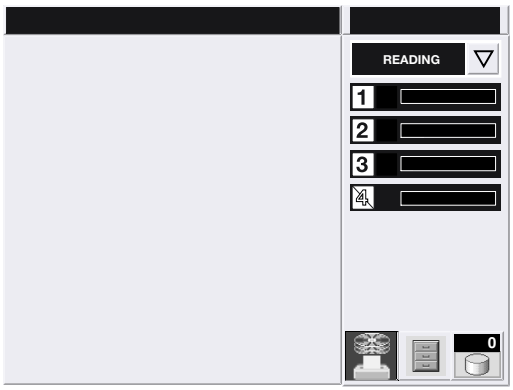
When the system power switch is turned ON, the startup processing progression status will be displayed on screen one line at a time. The display will change to the software version (Fig. 1.4), then, to the initialization progression status (Fig. 1.5), and the two-digit number displayed to the right of "STEP" will indicate initialization (self-diagnosis) progression status and will gradually be counted down. Initialization will be completed and processing status (Fig. 1.6) displayed, after which operation will be possible.

【Fig. 1.4】 Software Version Indication Screen

【Fig. 1.5】 Initialization Progression Status Screen



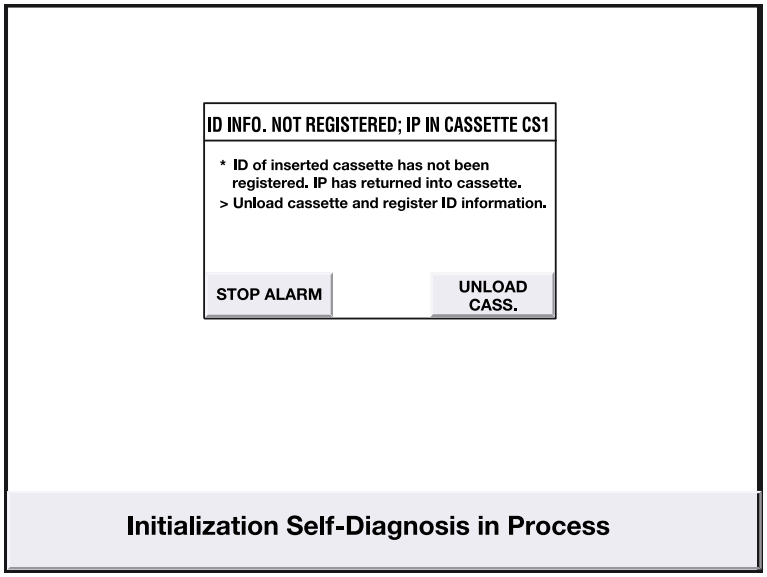
【Fig. 1.6】 Processing Status Display Screen



1.6.2 Pop-up Window

If some trouble occurs within the device, a pop-up window like the following will appear and the content of the trouble reported. Read the message and instruction in the window and then press the appropriate selection key.
The following example is one that informs that the patient's ID has not been registered. Take appropriate measures as instructed by the message.

[Fig. 1.7] Pop-up Window (Ex.: Patient ID information not registered)


ID INFO. NOT REGISTERED; IP IN CASSETTE CS1
* ID of inserted cassette has not been registered. IP has returned into cassette.
> Unload cassette and register ID information.
STOP ALARM
UNLOAD CASS.
Initialization Self-Diagnosis in Process

!! If the message extends over multiple lines and is difficult to understand, the following symbols will be used at the head of the message for organization purposes.

Displayed Symbol	Use
>	Indicates a demand or countermeasure for user to fulfill.
+	Indicates operations and methods for another countermeasure.
*	Indicates detailed instructions.
→ **Operation manual**	Indicates there is a more detailed explanation in the Operation Manual (this manual). See **Chapter 4 If "➡ Operation Manual" is displayed**.

1.6.3 Screen Saver Function

If there is no touch-panel input or cassette operation performed after a set time, the entire screen will go black and the CRT surface will be protected. When the screen is touched or cassette operations performed, the screen display will return.

Chapter **2**

Operations

2

2.1 Starting Up and Shutting Down the System

2.1.1 Starting Up the System

When the FCR 5000 plus's circuit breaker has been turned ON, the entire system will be started up by conducting one of the following operations, depending on settings at time of installation.

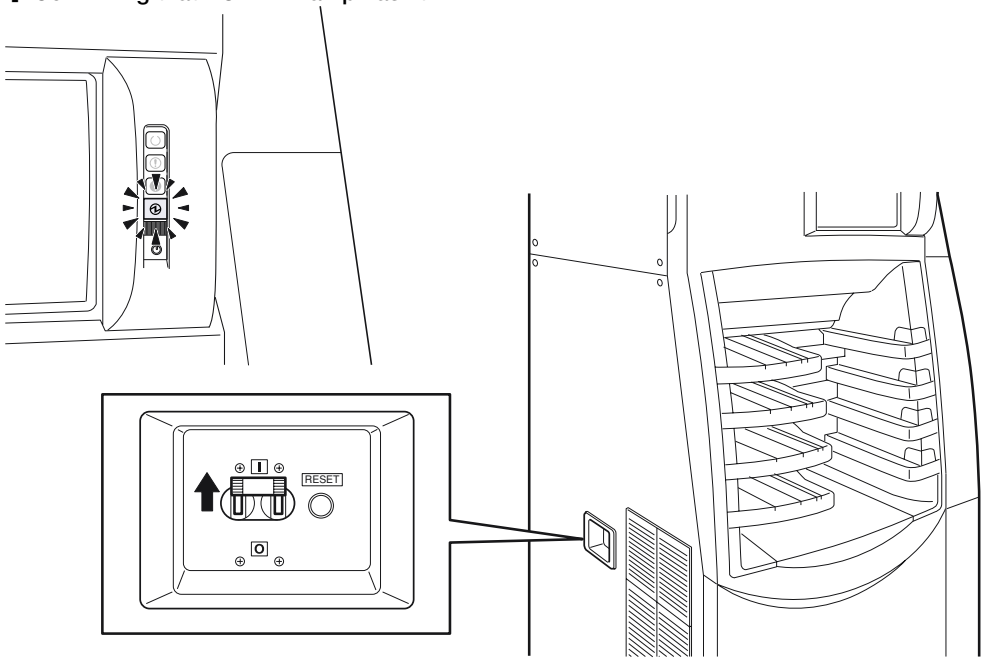
- Turn ON the System Power switch on the operation panel of the FCR 5000 plus.
- Turn ON the System Power switch of the ID Terminal (or the CR Console) connected to the FCR 5000 plus.

This manual presumes that the entire system is turned ON/OFF via the FCR 5000 plus's system power switch and thus explains this startup method.

Whether the system power switch is set to the ID Terminal or the CR Console, see the respective Operation Manual to turn ON power to each device.

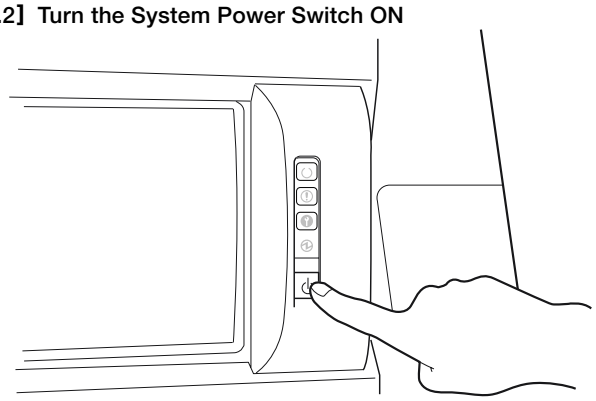
1 Confirm that the POWER lamp on the operation panel lights green. (If it is not lit, the FCR 5000 plus's circuit breaker has been turned OFF. Turn the circuit breaker back ON by turning it to the I side.)

[Fig. 2.1] Confirming that POWER Lamp has lit



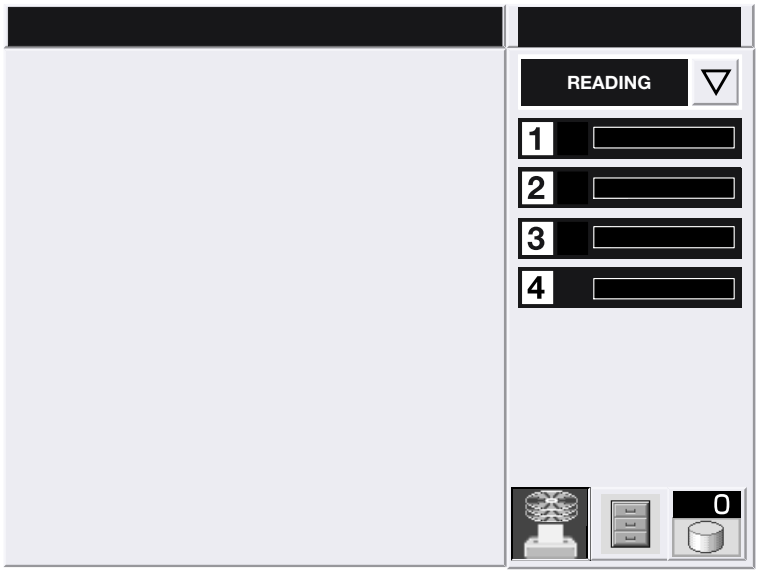
2 Press the System Power switch on the operation panel.

[Fig. 2.2] Turn the System Power Switch ON



3 After the operation panel displays startup processing progression status, software version and initialization progression status, the READY lamp will light, and the screen will change to the processing status display screen as shown below, indicating that the device has started up normally.

[Fig. 2.3] Processing Status Display Screen (immediately after startup)



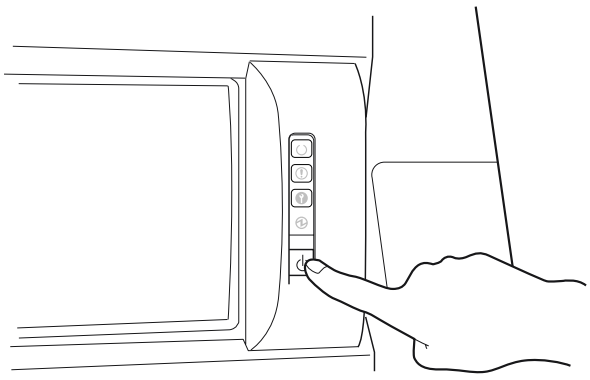
!! For the screen displays from when the power is turned ON until the processing status display screen appears, see p. 1-15, **1.6.1 Screens from Power ON to Processing Status Display**.

2.1.2 Shutting Down the System

1 Confirm that the processing of all inserted cassettes has been completed and then remove all the cassettes.

2 Press the System Power switch on the operation panel.

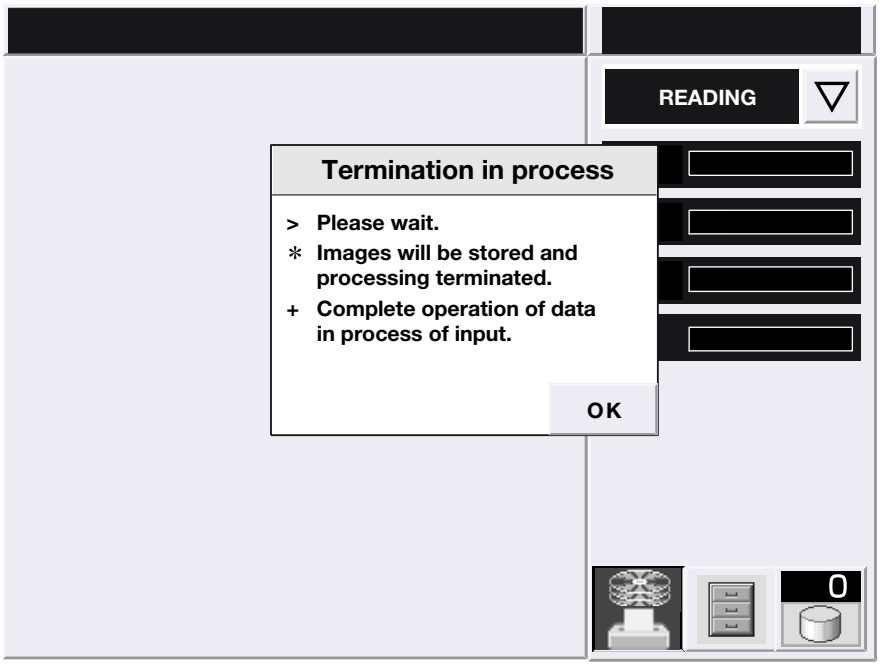
[Fig. 2.4] System Power Switch OFF



3 After a while, the power for the entire system, including this device, will be turned OFF. Leave the circuit breaker ON.

!! Basically, during shutdown processing, a window like the following will be displayed. Processing of an unprocessed image (print, file) will be resumed automatically when the equipment is rebooted.

[Fig. 2.5] When an Unprocessed IP Remains

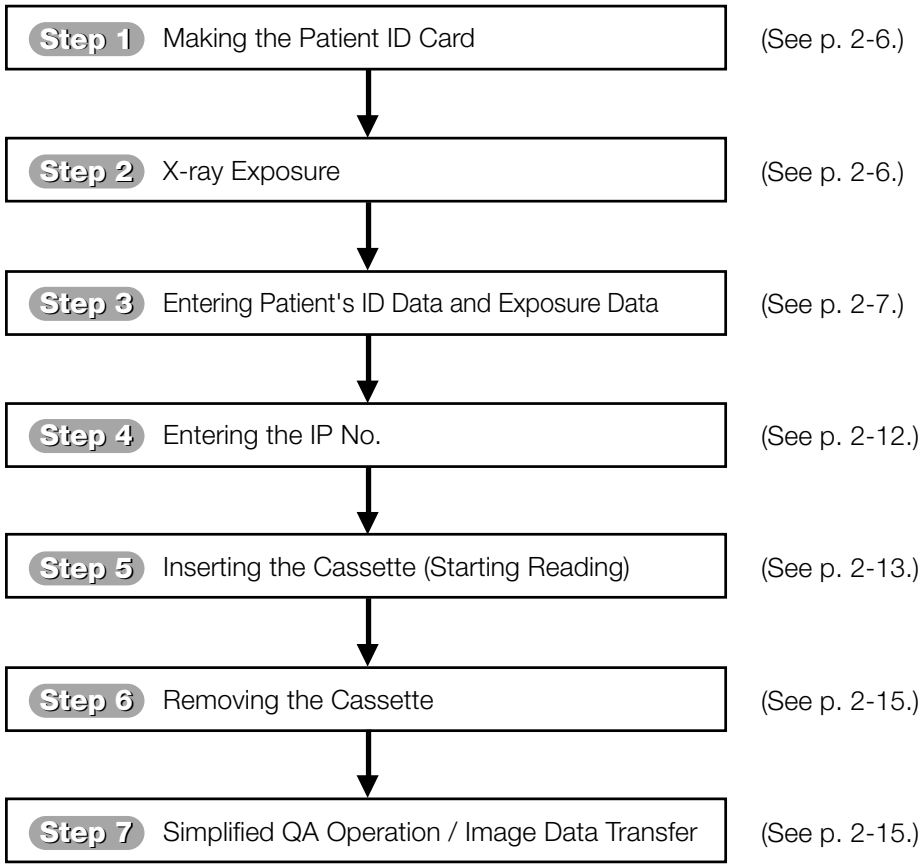


- If an unprocessed IP remains, system will wait for processing to be terminated and the power will then be automatically turned OFF.

!! Do not turn ON the device power immediately after it has been turned OFF (within 5 seconds).

2.2 Routine Operations

FCR 5000 plus routine operations can be broadly divided into the following six steps.


Step 1 Making the Patient ID Card
(See p. 2-6.)
Step 2 X-ray Exposure
(See p. 2-6.)
Step 3 Entering Patient's ID Data and Exposure Data
(See p. 2-7.)
Step 4 Entering the IP No.
(See p. 2-12.)
Step 5 Inserting the Cassette (Starting Reading)
(See p. 2-13.)
Step 6 Removing the Cassette
(See p. 2-15.)
Step 7 Simplified QA Operation / Image Data Transfer
(See p. 2-15.)

Step 1 Making the Patient ID Card

Using the ID Card Writer, make a patient ID card (magnetic card) that contains the following 4 items.

(1) ID No.
(2) Name
(3) Date of Birth
(4) Sex

Refer to the separate **ID Card Writer Operation Manual** for how to make a patient ID card.

Step 2 X-ray Exposure

Using a cassette that contains an erased IP, conduct X-ray exposure using the same technique as for the conventional film/screen method.
For precautions particular to exposure using the FCR system, see **Appendix Z, Precautions for Exposure**. Read it well first and then conduct exposure while observing the related caution.

Concerning IP erasure method, see **2.4 Conducting Exposure Using a Cassette (IP) Left Unused for 8 Hours or More [SECONDARY ERASURE]** and **2.5 Conducting Image Erasure Only [PRIMARY ERASURE]**.

Step 3 Entering Patient's ID Data and Exposure Data

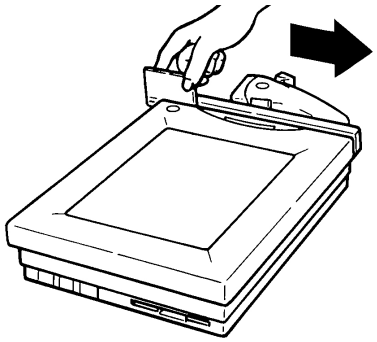
▶ When Using the ID Terminal

To verify that the exposed cassette (IP) and the patient's examination conditions match, input the following patient information (ID) and exposure condition data in the ID Terminal. This information will be sent online to the FCR 5000 plus and stored in memory.

(1) Patient's ID No.
(2) Patient's name
(3) Date of Birth
(4) Sex
(5) Exposure condition data (anatomical region, exposure menu and technique)

1 Read the patient's ID card (made in Step 1) at the ID Terminal's card reader. (Set the card in at the top of the slot and slide it evenly downward. When you hear a "beep," reading has been completed.)

[Fig. 2.6] ID Card Reading



!! If you read the ID card for any patient else by mistake, then follow by reading the ID card for the right patient and the data will be overwritten.

2 Enter "(5) Exposure condition data" to the ID Terminal.
For operation method, see the **ID Terminal Operation Manual**.

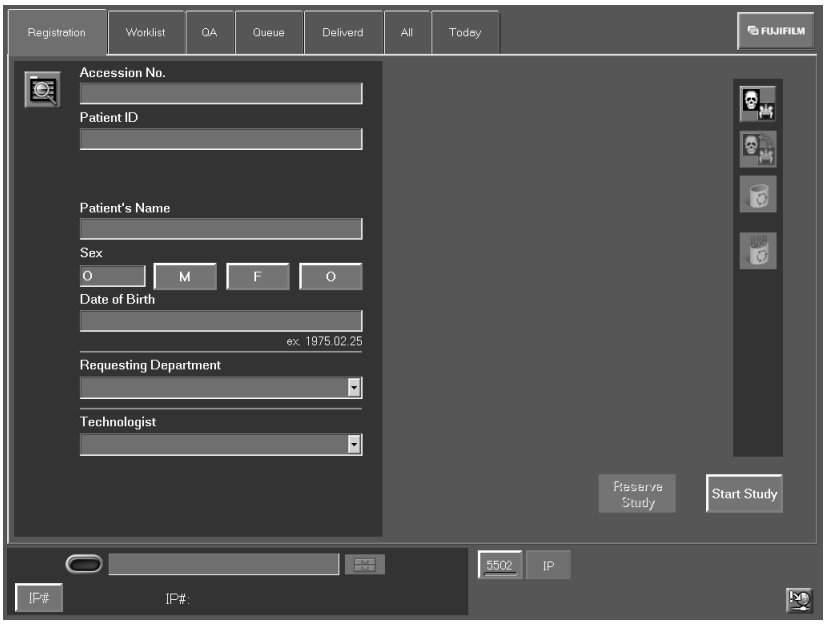
▶ When Using the CR Console

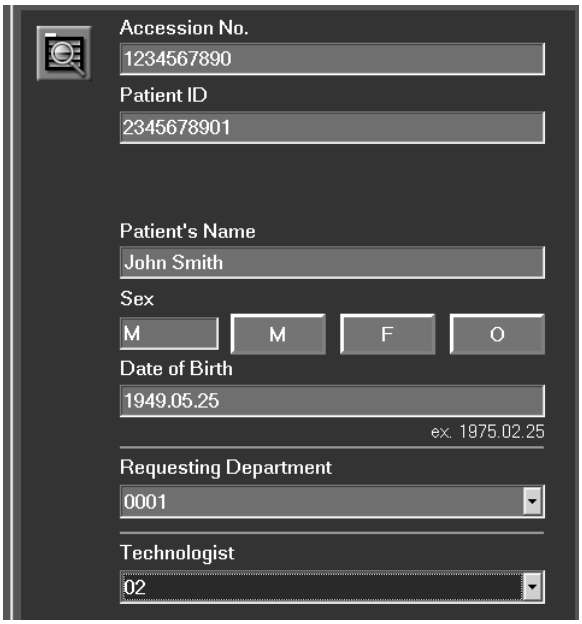
1 The Study Reception window like that shown below is displayed on the CR Console display immediately after the CR Console has been activated.

Enter the following patient information items.

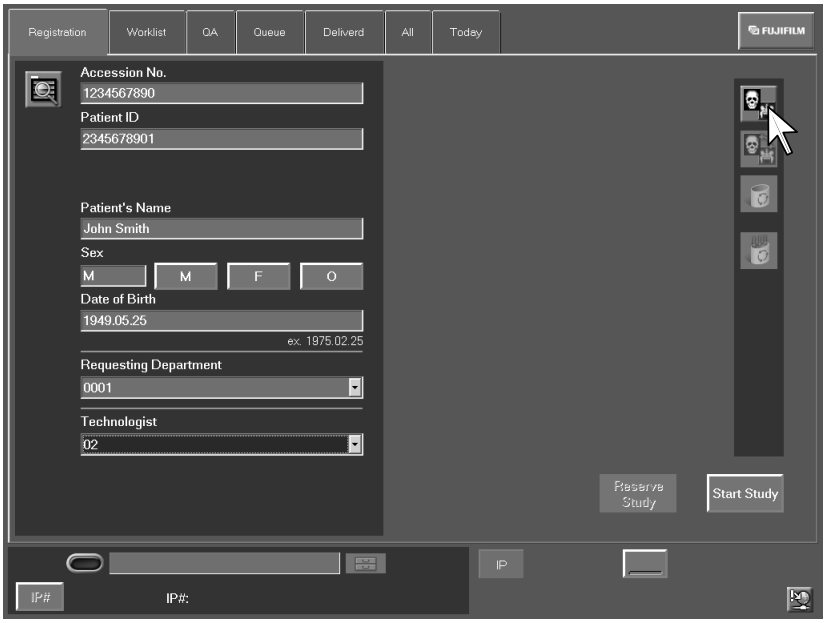
- Accession No.
- Patient ID
- Patient Name
- Sex
- Date of Birth
- Requesting Department (If necessary.)
- Technician Name (If necessary.)

When the optional card reader is provided, patient information input can be read a magnetic card.

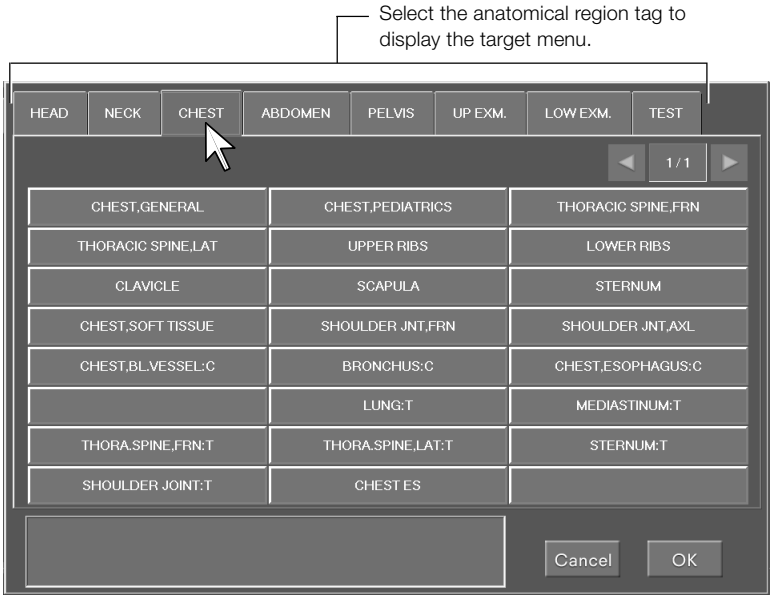




2 Select the (adding exposure menu) button to display the anatomical region and exposure/study menu.

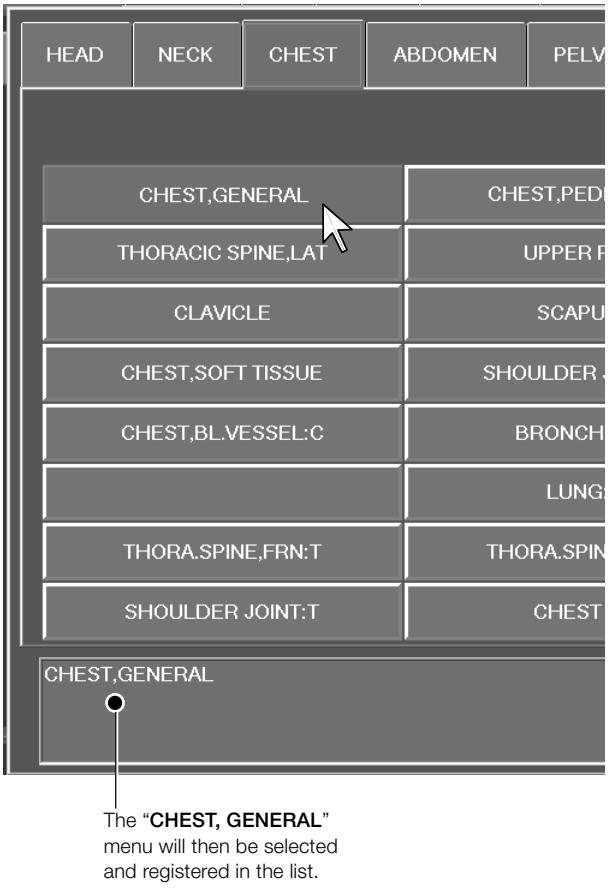


3 Select the anatomical region to display exposure/study menu.

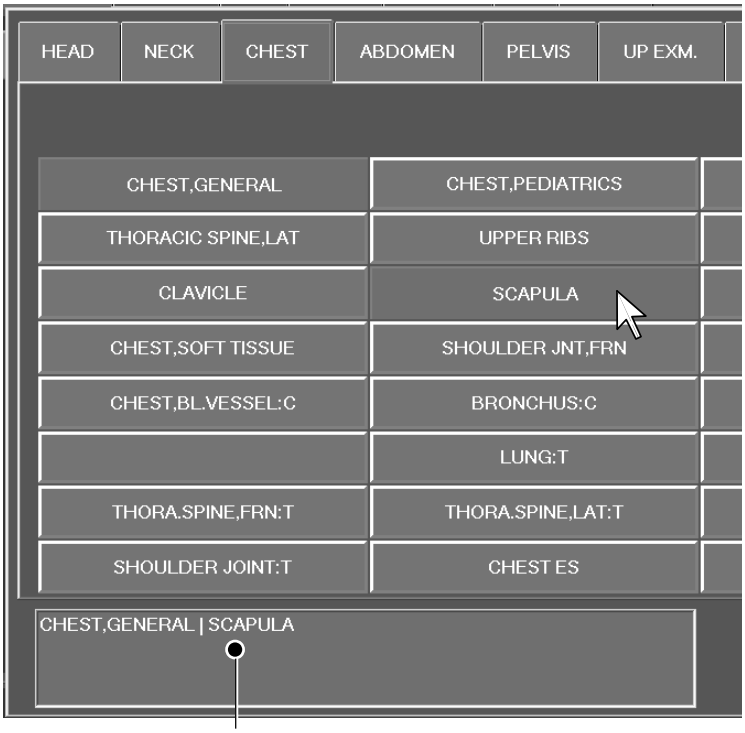


4 Select the exposure/study menu.

Select, for example, the "**CHEST, GENERAL**" menu.



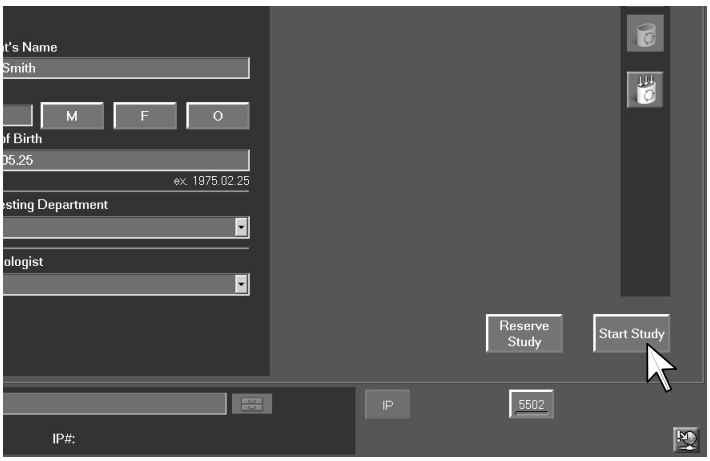
5 Select then the "**SCAPULA**" menu, for example.



The "**SCAPULA**" menu will thus be added and registered in the list.

6 Select the OK button after registering the menu.

7 The Study Reserve (Start) screen appears. Select the Start Study button.



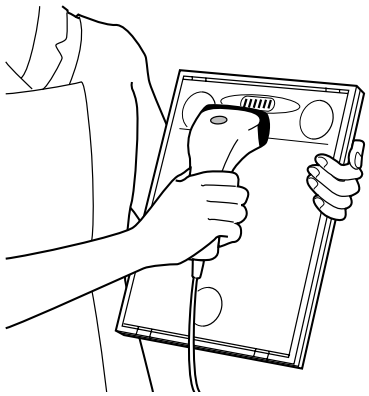
When the Study Reserve button is selected, the menu thus registered will be stored in the List.
For the Study Reserve and operation procedures, refer to the [**CR Console Operation Manual**] for details.

6 The IP No. Input screen appears. Proceed to Step 4.

Step 4 Entering the IP No.

Using the ID Terminal barcode reade or the CR Console barcode reader, read the IP barcode (IP number) contained in the cassette.
The patient ID and exposure data entered in Step 3 and the cassette (IP) will be verified.

[Fig. 2.7] Entering the IP No.



Step 5 Inserting the Cassette (Starting Reading)

Insert the cassette (IP) that has been registered at the ID Terminal into an empty setting unit (rack).

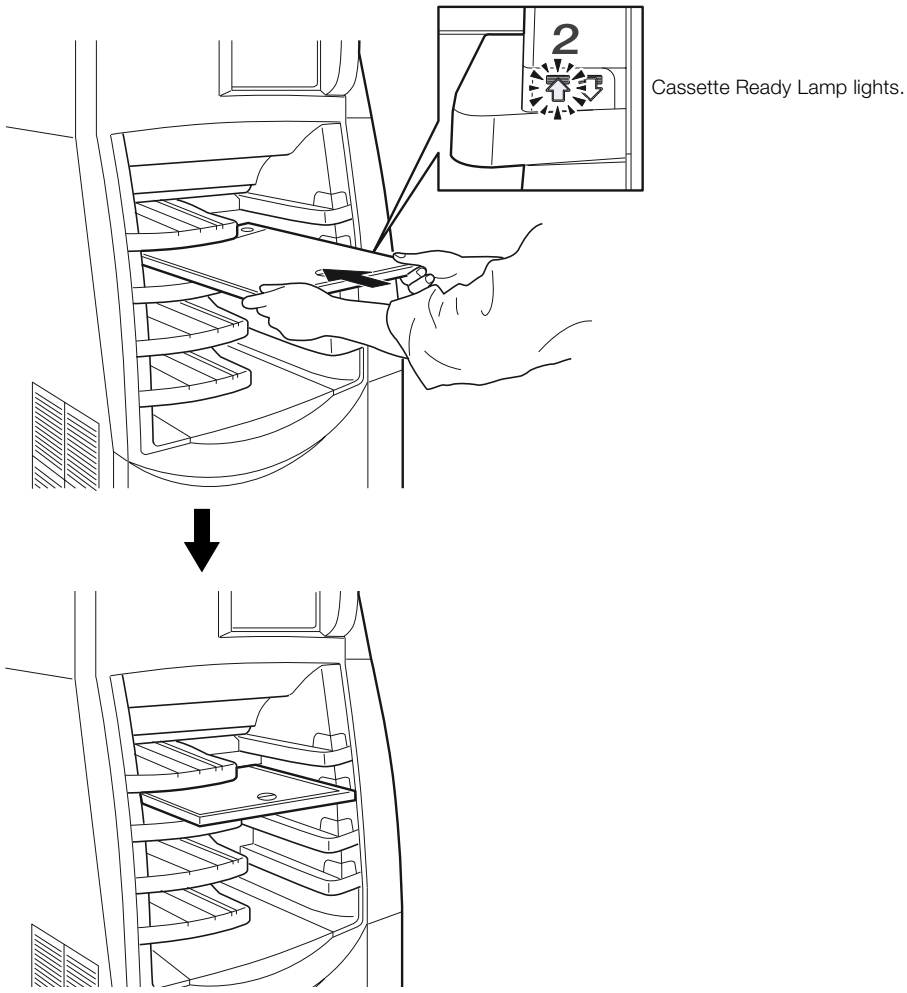
1 Confirm that the empty cassette setting unit's Cassette Ready Lamp lights (green).

2 With the cassette's barcode window facing up and in front, insert the cassette straight along the guide on the right.

!! **1** Be sure to insert the cassette as illustrated, straight along the guide on the right.
Cassettes that have been set upside-down, in the wrong direction or at a slant will result in abnormalities and may damage the machine.

2 Make sure to remove all exposure markers used at the time of exposure before inserting the cassette.

[Fig. 2.8] Inserting the Cassette

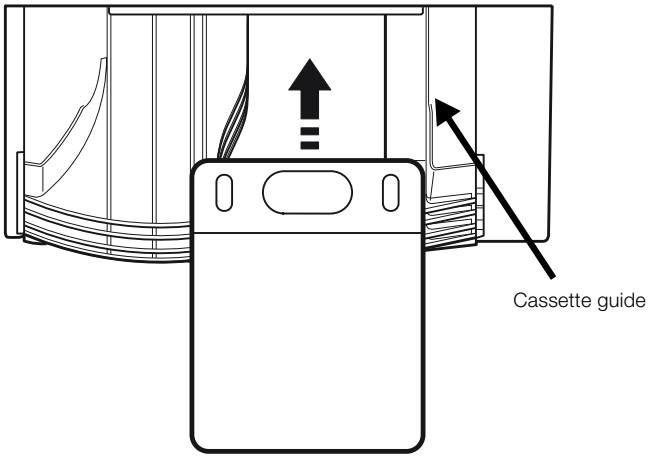


Read image will be displayed on the operation panel monitor.

3 Inserting cassettes into empty cassette setting units and repeating the above procedure makes continuous cassette processing possible.

■ Precautions when inserting the cassette

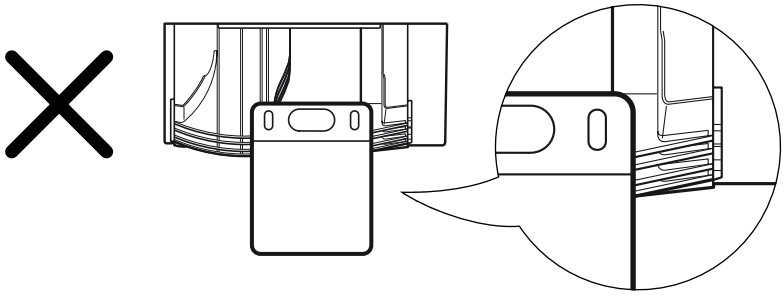
Make sure to insert the cassette **Slowly** so that it is straight along the guide on the right.



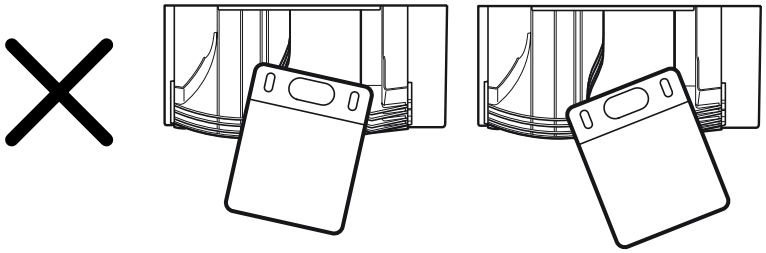
Insert straight Slowly.

CAUTION: Never insert a cassette as illustrated below or damage to the device could result.

Incorrect: Cassette is not straight along the guide. There is a gap.



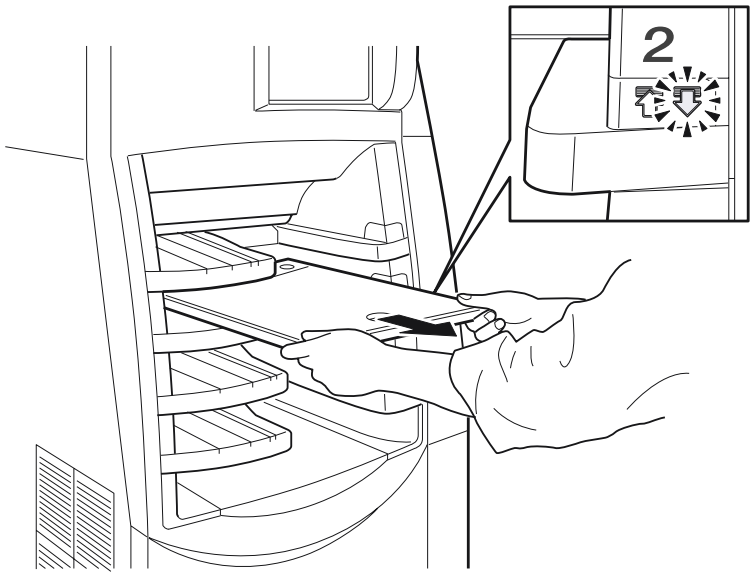
Incorrect: Cassette is inserted at a slant.



Step 6 Removing the Cassette

When the Cassette Removal Lamp is lighting, the cassette has been processed and can thus be removed. Remove the cassette slowly and straight and it can be used directly for the next exposure.

[Fig. 2.9] Removing the Cassette



Step 7 Simplified QA Operation / Image Data Transfer

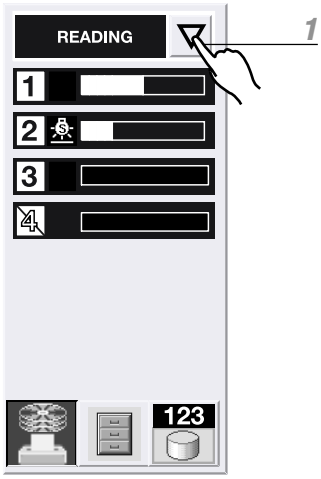
A read image will be transferred to the CR Console and then displayed on the monitor. Simplified QA operations, such as rotation, reversal, gradation adjustment, etc., can be performed on the image.
In addition, the image can also be transferred to the Image Recorder and other devices.
For detailed operation procedures, see the separate [**CR Console Operation Manual**].

2.3 Urgent Processing of Another Cassette (IP) [URGENT]

If there is a cassette (IP) for which urgent processing is necessary, use the following procedure for URGENT processing.

1 Touch the ▽ **Processing Mode Switchover** key to display the processing selection screen.

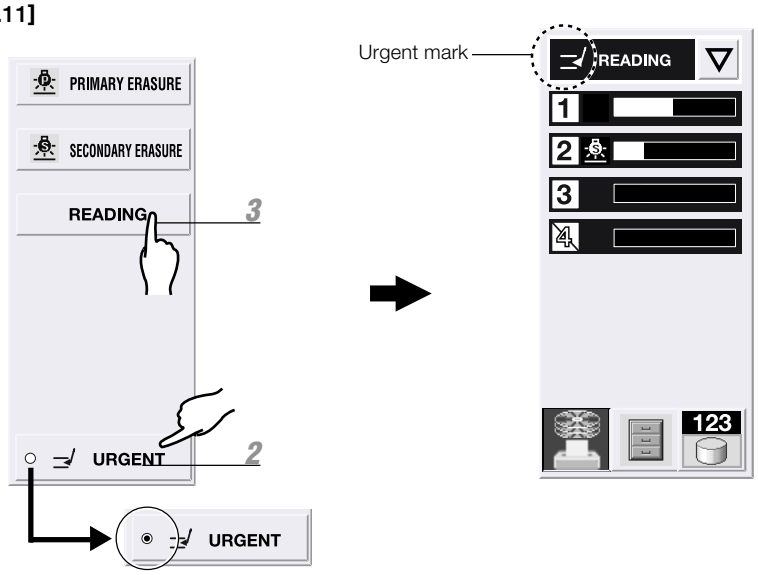
[Fig. 2.10]



2 Touch the URGENT key for selection (indicated by ◉).

3 Touch the READING key to determine and return to the previous screen.

[Fig. 2.11]



3 URGENT will be accepted. Here, insert the urgent cassette in the empty cassette setting unit rack No. 3 in the example above. This cassette (IP) will be given priority over the images awaiting processing in the device and will be subjected to processing.

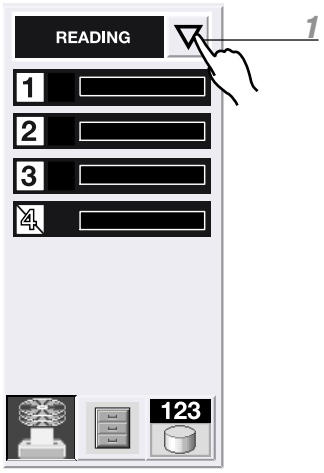
!! When URGENT has been specified, at the stage where cassette has been inserted, the settings for that IP will be considered completed and the setting (display) will return to the default, READING. Thus, settings are valid one time only.

2.4 Conducting Exposure Using a Cassette (IP) Left Unused for 8 Hours or More [SECONDARY ERASURE]

When conducting exposure with an IP that has not been used for 8 hours or more, the cassette (IP) should first be subjected to secondary erasure processing because natural radioactive rays will have accumulated on the IP, making it necessary to eliminate the excess energy. Operation method follows.

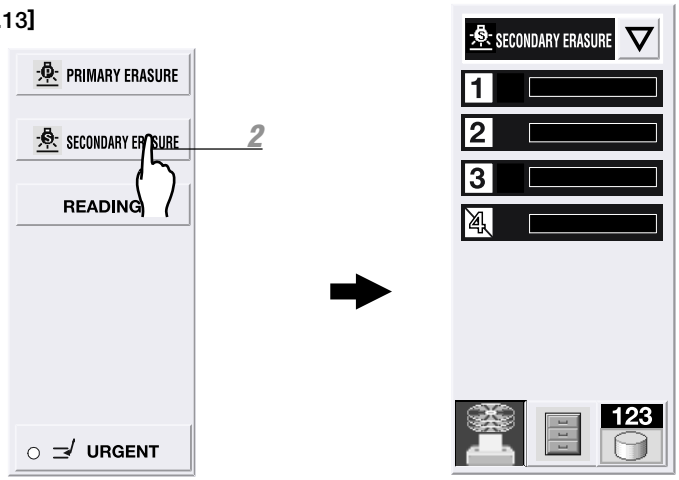
1 Touch the ▽ **Processing Mode Switchover** key to display the processing selection screen.

[Fig. 2.12]



2 Touching the SECONDARY ERASURE key will select it and the screen will automatically return to the previous screen.

[Fig. 2.13]



3 SECONDARY ERASURE processing has been selected for the cassette to be inserted. Insert the appropriate cassette in the cassette setting unit. The IP inside the cassette will be subjected to SECONDARY ERASURE processing.
As the IP returned to the cassette will have undergone SECONDARY ERASURE, it can be used as is for exposure.

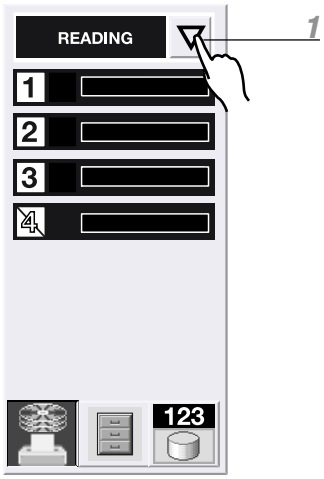
!! When SECONDARY ERASURE has been specified, at the stage the cassette is inserted , the setting for that IP will be considered completed, and the setting (display) will be returned to the default (reading). Thus, the setting is valid one time only.

2.5 Conducting Image Erasure Only [PRIMARY ERASURE]

To erase an image on IP – owing to exposure errors, etc. – without reading it, use the following procedure to conduct primary erasure processing.

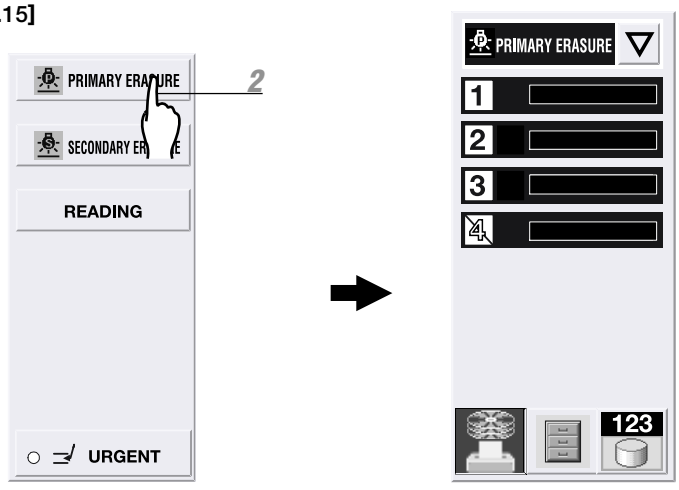
1 Touch the ▽ **Processing Mode Switchover** key to display the processing selection screen.

[Fig. 2.14]



2 Touching the PRIMARY ERASURE key will select it and the screen will automatically return to the previous screen.

[Fig. 2.15]



3 PRIMARY ERASURE processing has been specified for the cassette to be inserted. Insert the appropriate cassette in the empty cassette setting unit. The IP inside the cassette will be subjected to PRIMARY ERASURE processing.
As the IP returned to the cassette has undergone PRIMARY ERASURE, it can be used as is for exposure.

!! When PRIMARY ERASURE has been specified, at the stage when the cassette is inserted, the settings for that IP will be considered completed, and the setting (display) will return to the default (Reading). Thus, the setting is valid one time only.

Chapter **3**

User Utility

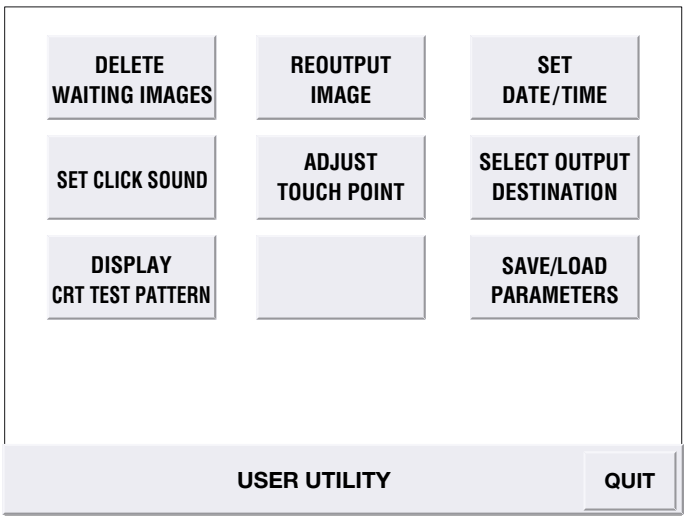
3

3.1 What is the User Utility?

The User Utility provides users with the following functions, which differ from routine operations.

!! Do not insert the cassette white the system is in User Utility mode.

[Fig. 3.1] User Utility Initial Screen



(1) DELETE WAITING IMAGES
Groups images on the hard disk awaiting processing by destination and deletes them.

(2) REOUTPUT IMAGE
Displays a list of all images that have been output and deleted. Selecting and displaying a specific image from this list and modifying some of the parameters will make it possible to re-output the image.

(3) SET DATE / TIME
Makes it possible to modify the date and time on the device's internal clock.

(4) SET CLICK SOUND
Makes it possible to set ON/OFF the click sound that is made when keys are touched and when a caution is indicated.

(5) ADJUST TOUCH POINT
Makes it possible to adjust the touch point.

(6) SELECT OUTPUT DESTINATION
Makes it possible to select the image output destination.

(7) DISPLAY CRT TEST PATTERN
Displays test pattern and can judge CRT deterioration, etc.

(8) SAVE / LOAD PARAMETERS
Uploads / downloads each parameter file.

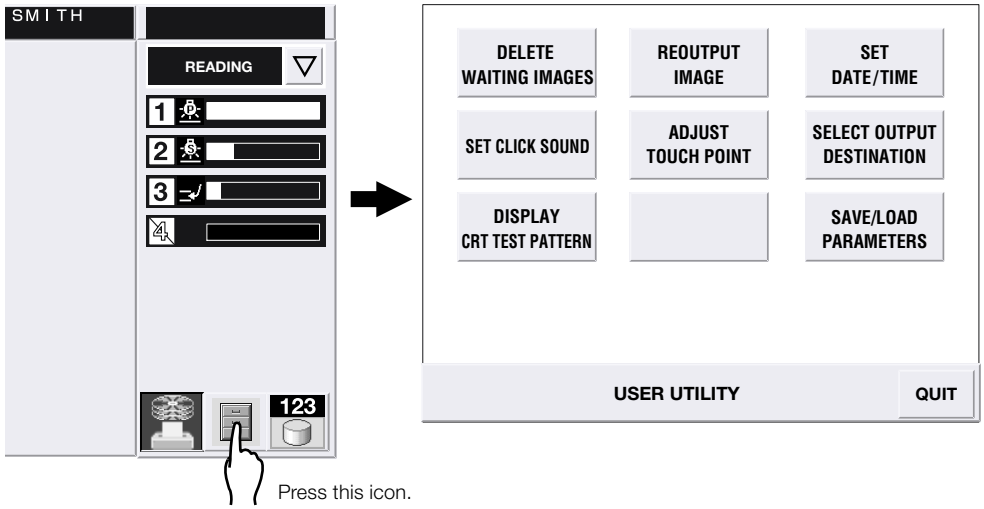
!! When using the CR Console, **(2) REOUTPUT IMAGE** and **(6) SELECT PRINTER** are not available.

3.2 Starting Up and Quitting the User Utility

3.2.1 Starting Up

Touch the User Utility icon on the processing status display screen. A few seconds after "Please wait" has been displayed on the screen, the entire screen will change to User Utility mode.

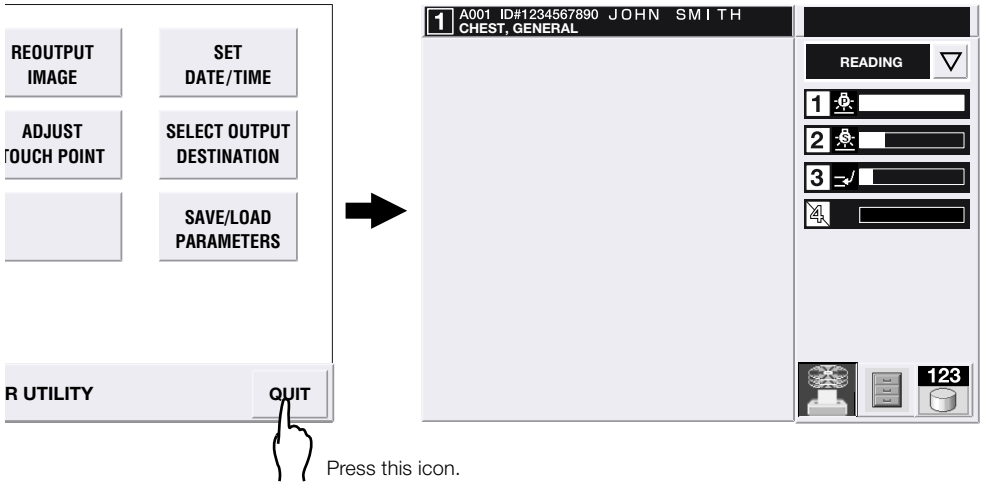
【Fig. 3.2】 User Utility Initial Screen



3.2.2 Quitting

Touch the QUIT key on the **User Utility Initial** screen and the processing status display screen will return.

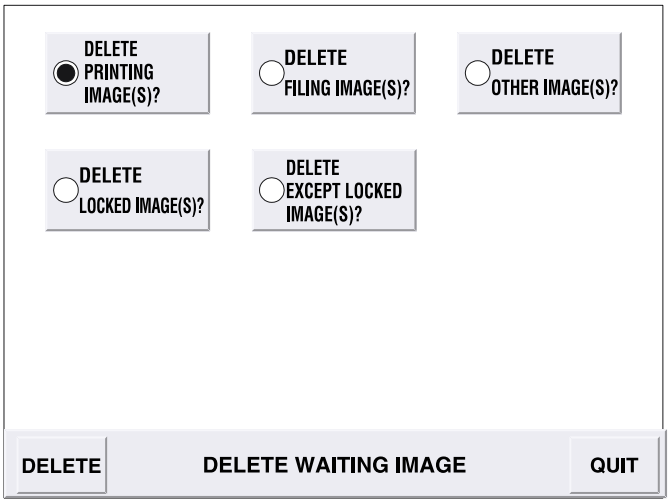
【Fig. 3.3】



3.3 DELETE WAITING IMAGE DELETE WAITING IMAGES

1 When the DELETE WAITING IMAGE key is touched, the screen will change to the following. Here, it is possible to group images on the hard disk awaiting processing by their destination and delete them.

[Fig. 3.4] DELETE WAITING IMAGES Screen

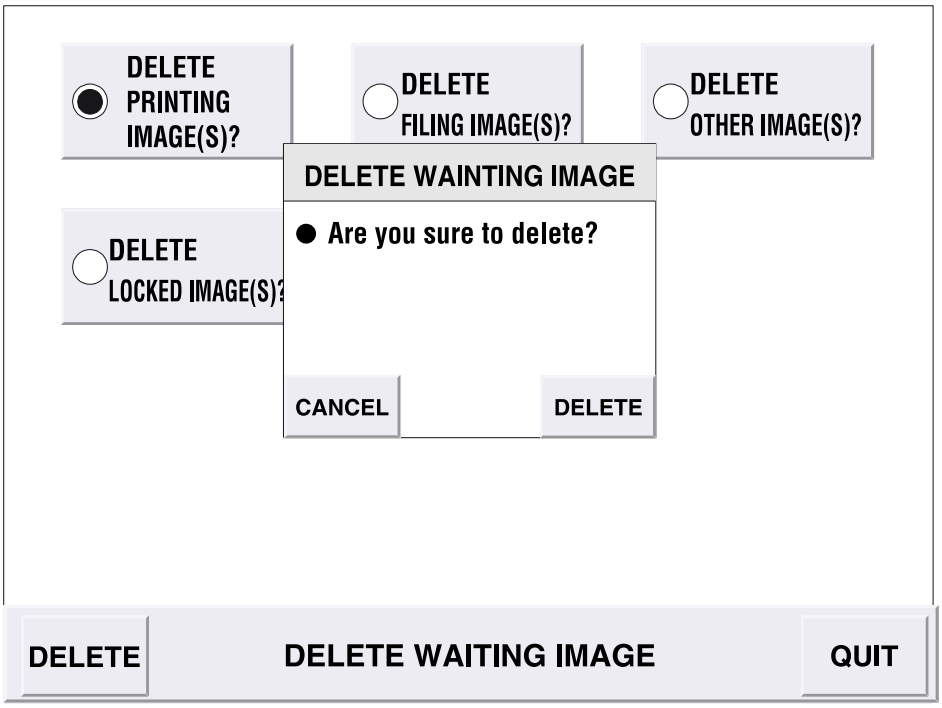


DELETE PRINTING IMAGE(S)?	Deletes all images awaiting output to LP (including images for reprinting).
DELETE FILING IMAGE(S)?	Deletes all images awaiting output to ODF.
DELETE OTHER IMAGE(S)?	Deletes all images awaiting output except for above (ex. HIC).
DELETE LOCKED IMAGE(S)?	Deletes all locked images awaiting output.
DELETE EXCEPT LOCKED IMAGE(S)?	Deletes all images -- other than locked ones - awaiting output.

!! See **3.4 REOUTPUT IMAGE** about the “locked image”.

2 Touch the key for the desired function. ○ will change to ◉, indicating the selection that has been made.

3 Touch the DELETE key. The following confirmation window will appear.



4 Touch the DELETE key if OK. (If the CANCEL key is touched, image deleting will be canceled.)

5 Image deleting is executed and then COMPLETED will be displayed when the image has actually been deleted.

6 To return to the **User Utility Initial** screen, touch the QUIT key.

3.4 REOUTPUT PROCESSED IMAGE REOUTPUT IMAGE

When using the CR Console, this function is not available.

The following six items can be reset and image density and/or contrast can be re-adjusted on the output images stored in the hard disk and the images that have not yet been output and selected to be deleted.

(1) Image Lock
Output images and unprocessed images that have been specified to be deleted are usually overwritten and deleted from the hard disk. When these images are locked (ON) with this function, they will not be deleted and will be stored in the hard disk.

(2) Image Re-transmission
Selects new destinations for image transmission.

(3) Image Re-storage
Transmits (files) images to the ODF (optical disc image filing unit).

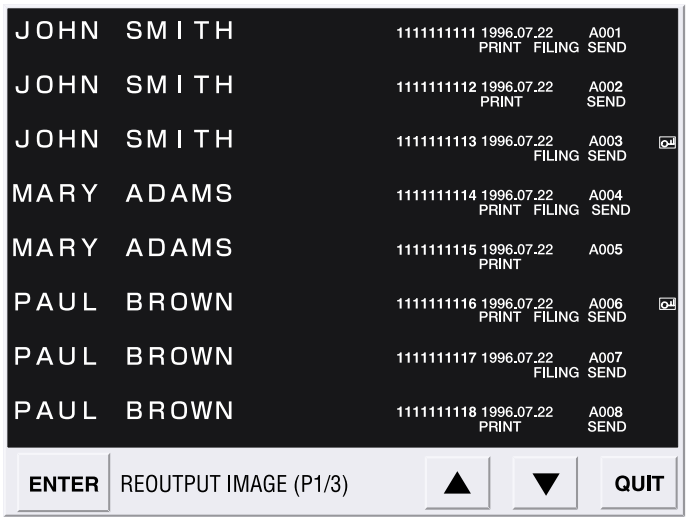
(4) Film Re-output
Re-outputs images on film.

(5) Gradation Shift (CS)
Specifies the C-Shift (contrast) on the image.
The C-Shift is a coefficient given to parameters for the gradation curve, which makes it possible to change the image contrast.

(6) Density Shift (SS)
Specify S-Shift (density) on the image.
The S-Shift is a coefficient given to parameters for reading sensitivity, which makes it possible to change the image display density.

1 When the REOUTPUT PROCESSED IMAGE key is touched, a list of images that have been output and those that have not yet been output and specified to be deleted will be displayed, like the following. Selecting and displaying a specific image from this list and modifying each parameter will make it possible to re-output the image.

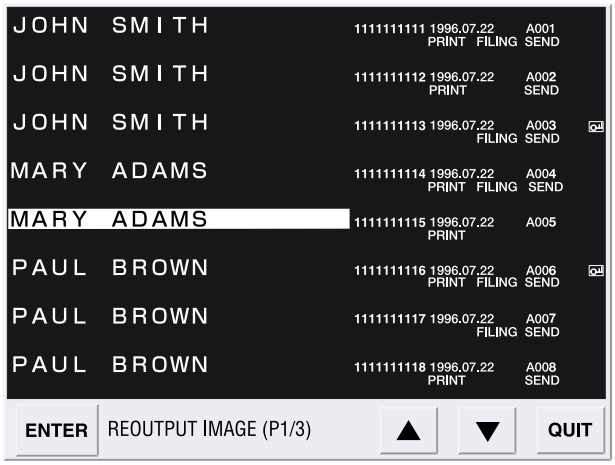
[Fig. 3.5] REOUTPUT IMAGE Screen


JOHN SMITH 1111111111 1996.07.22 A001 PRINT FILING SEND
JOHN SMITH 1111111112 1996.07.22 A002 PRINT SEND
JOHN SMITH 1111111113 1996.07.22 A003 FILING SEND
MARY ADAMS 1111111114 1996.07.22 A004 PRINT FILING SEND
MARY ADAMS 1111111115 1996.07.22 A005 PRINT
PAUL BROWN 1111111116 1996.07.22 A006 PRINT FILING SEND
PAUL BROWN 1111111117 1996.07.22 A007 FILING SEND
PAUL BROWN 1111111118 1996.07.22 A008 PRINT SEND
ENTER
REOUTPUT IMAGE (P1/3)
QUIT

"OK" or "D" will be added to the image no.
"OK" indicates that images have been output to all specified destinations normally.
"D" indicates that images awaiting processing have been deleted.

2 Select an image you wish to modify and re-output by touching the appropriate line on the display. (Line will then be displayed in reverse video. To release the selection, retouch the line.) Then, press the ENTER key. Screen will change to the **PARAMETER RESETTING** screen (Fig. 3.7).

[Fig. 3.6] Selecting an Image

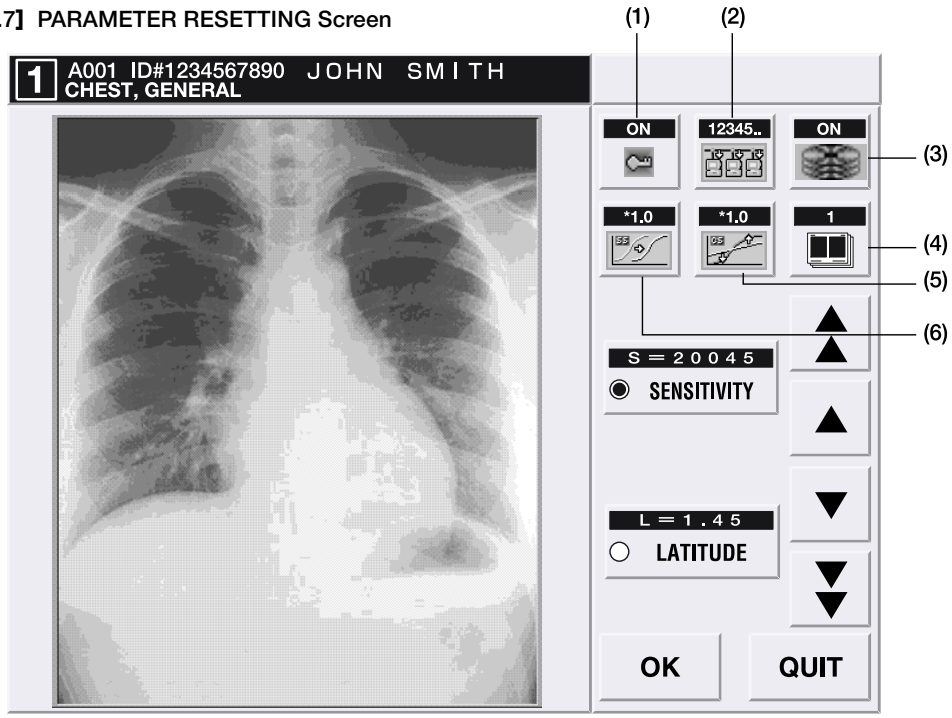

JOHN SMITH 1111111111 1996.07.22 A001 PRINT FILING SEND
JOHN SMITH 1111111112 1996.07.22 A002 PRINT SEND
JOHN SMITH 1111111113 1996.07.22 A003 FILING SEND
MARY ADAMS 1111111114 1996.07.22 A004 PRINT FILING SEND
MARY ADAMS 1111111115 1996.07.22 A005 PRINT
PAUL BROWN 1111111116 1996.07.22 A006 PRINT FILING SEND
PAUL BROWN 1111111117 1996.07.22 A007 FILING SEND
PAUL BROWN 1111111118 1996.07.22 A008 PRINT SEND
ENTER
REOUTPUT IMAGE (P1/3)
QUIT

3 On the parameter resetting screen, the following six items can be reset and sensitivity and/or latitude can be re-adjust.
Touching the icon key of the parameter to be reset will change the display to the screen for each parameter setting. Reset parameters as per reference pages shown above.

(1) Image Lock ➡ See page 3-9.
(2) Image Re-transmission ➡ See page 3-10.
(3) Image Re-storage ➡ See page 3-11.
(4) Film Re-output ➡ See page 3-12.
(5) Gradation Shift (CS) ➡ See page 3-13.
(6) Density Shift (SS) ➡ See page 3-14.

!! 1 After an image has been reset, a new no. will be assigned to it and the former no. will be deleted.
2 When the distribution code has been modified, the former distribution code will be disregarded and it will start anew from the beginning.

[Fig. 3.7] PARAMETER RESETTING Screen



4 After resetting each parameter, touch the OK key on **[Fig. 3.7]** above to return to the **[Fig. 3.5] REOUTPUT IMAGE** screen.

!! If the QUIT key is touched, the content thus reset will be disabled and **[Fig. 3.5]** will be displayed with previous parameter(s) maintained. However, only "**(1) Image Lock**" setting will be reflected on **[Fig. 3.5]**.

5 On the **[Fig. 3.5] REOUTPUT IMAGE** screen, when you wish to modify and re-output other image(s), conduct the operation using the same procedure. When you wish to quit this function and to return to the **User Utility Initial** screen, touch the QUIT key.

Adjusting sensitivity and latitude

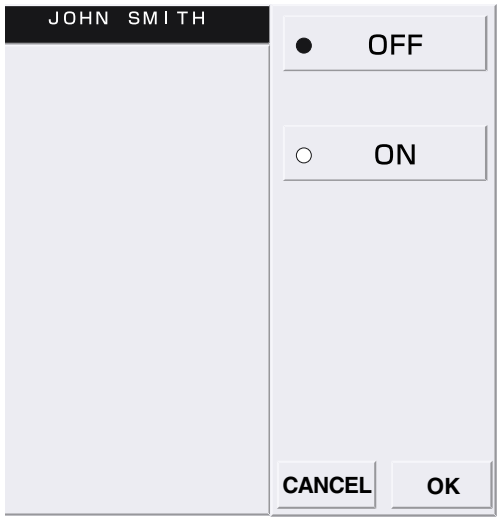
1 To change ○ to ◉ to turn the key ON, touch the key for the item you wish to adjust.

2 Touch the ▲ (⏫) and/or ▼ (⏬) key on the right side to change values.
And then, touch the OK key to return to the **[Fig. 3.5] REOUTPUT IMAGE** screen.

3 On the **[Fig. 3.5] REOUTPUT IMAGE** screen, when you wish to modify and re-output other image(s), conduct the operation using the same procedure. When you wish to quit this function and to return to the **User Utility Initial** screen, touch the QUIT key.

(1) Image Lock

1 Touching the key will display the image lock ON/OFF resetting screen shown below. (The default is OFF status.)



2 Touch the ○ ON key when you wish to lock the image.
After resetting, touch the OK key to return to **[Fig. 3.7] PARAMETER RESETTING** screen.

3 On the parameter resetting screen, touch the OK key. The screen will return to the **[Fig. 3.5] REOUTPUT IMAGE** screen.

(2) Image Re-transmission

1 Touching the key will display the distribution code resetting screen shown below. Enter the distribution code through the virtual ten-key pad and then touch the ENT key.

In this example, the distribution code has been set to CODE=01234567.

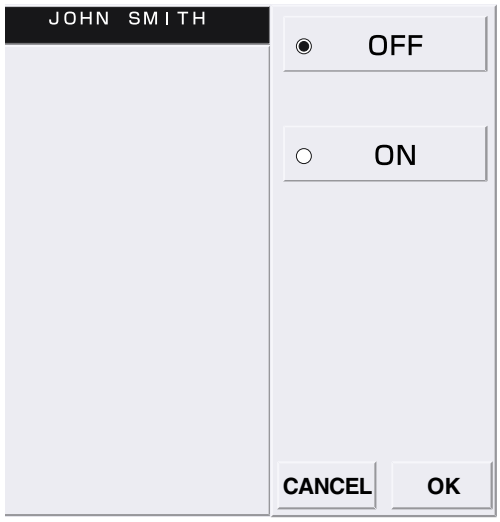
!! 1 See **ID Terminal Operation Manual** or **CR Console** for how to set the distribution code.
2 When the distribution code has been modified, the former distribution code will be disregarded and it will start anew from the beginning.

2 After resetting, touch the OK key to return to **[Fig. 3.7] PARAMETER RESETTING** screen.

3 On the parameter resetting screen, touch the OK key. The screen will return to the **[Fig. 3.5] REOUTPUT IMAGE** screen.

(3) Image Re-storage

1 Touching the key will display the image file ON/OFF resetting screen shown below. The key marked with ◉ represents the actual setting.



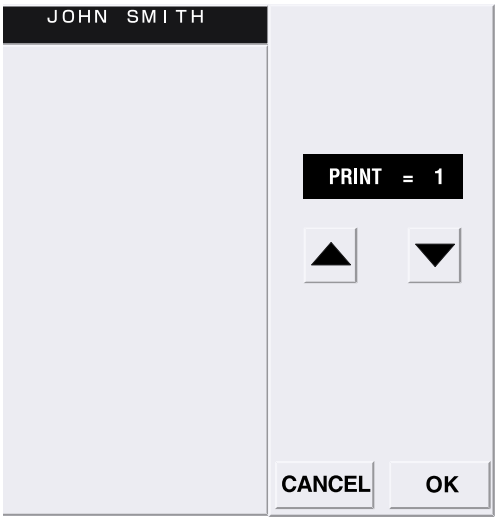
To turn the image re-storage ON, touch the [ON] key to change to ◉. The [OFF] key automatically changes to ○.

2 After resetting, touch the OK key to return to **【Fig. 3.7】 PARAMETER RESETTING** screen.

3 On the parameter resetting screen, touch the OK key. The screen will return to the **【Fig. 3.5】 REOUTPUT IMAGE** screen.

(4) Film Re-output

1 Touching the key will display the output film number resetting screen.



Touching the ▼ key will decrease the number of output film one by one and the ▲ key will increase it also one by one. Specify a desired value (number of output film).

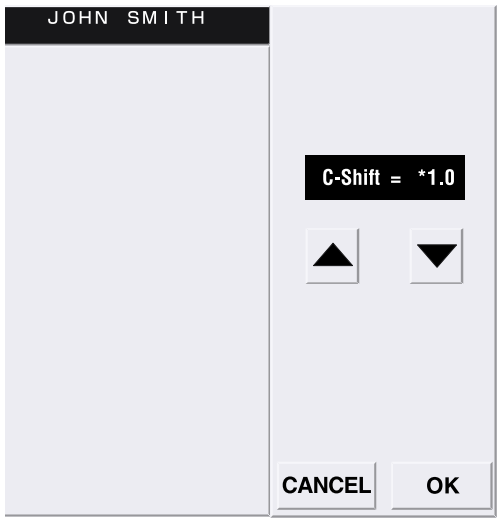
The figure shows the number of films output the last time.

2 After resetting, touch the OK key to return to **[Fig. 3.7] PARAMETER RESETTING** screen.

3 On the parameter resetting screen, touch the OK key. The screen will return to the **[Fig. 3.5] REOUTPUT IMAGE** screen.

(5) Gradation Shift (CS)

1 Touching the key will display the gradation shift (CS) resetting screen shown below.



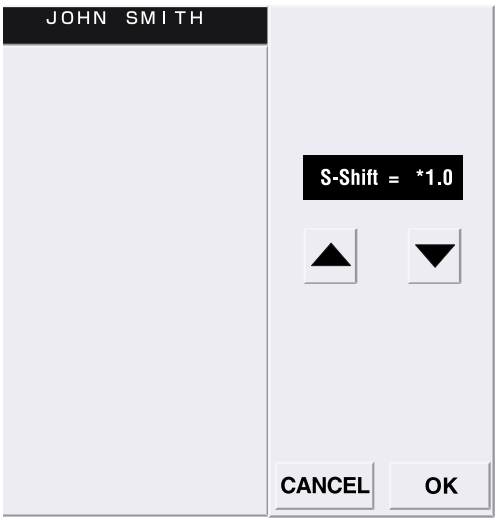
In this example, the gradation shift has been set to C-Shift=*1.0. (CS can be specified in the range of *(×)0.5 to *(×)2.0.)
Touching the ▼ key will decrease the above value by 0.1 and the ▲ key will increase it also by 0.1. Specify a desired value.

2 After resetting, touch the OK key to return to **[Fig. 3.7] PARAMETER RESETTING** screen.

3 On the parameter resetting screen, touch the OK key. The screen will return to the **[Fig. 3.5] REOUTPUT IMAGE** screen.

(6) Density Shift (SS)

1 Touching the SS key will display the density shift (S) resetting screen shown below.



In this example, the density shift has been set to S-Shift=*1.0. (SS can be specified in the range of /(÷)2.0 to *(×)2.0.)
Touching the ▼ key will decrease the above value by 0.1 and the ▲ key will increase it also by 0.1. Specify a desired value.

2 After resetting, touch the OK key to return to **[Fig. 3.7] PARAMETER RESETTING** screen.

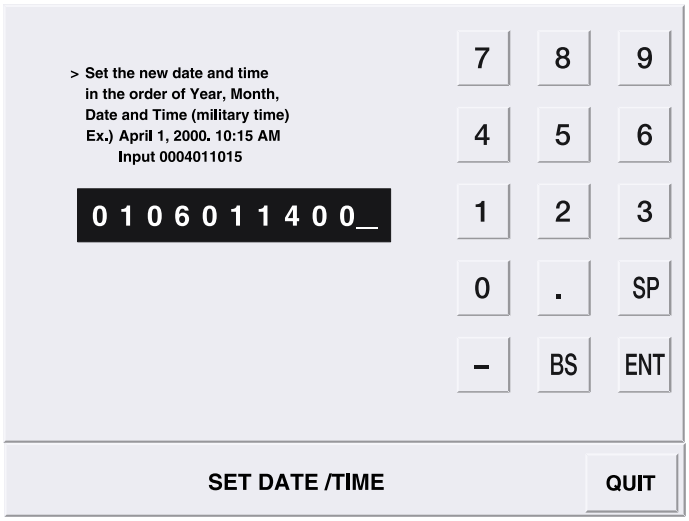
3 On the parameter resetting screen, touch the OK key. The screen will return to the **[Fig. 3.5] REOUTPUT IMAGE** screen.

3.5 SET DATE / TIME SET DATE/TIME

Makes it possible to modify the date and time on the device's internal clock.

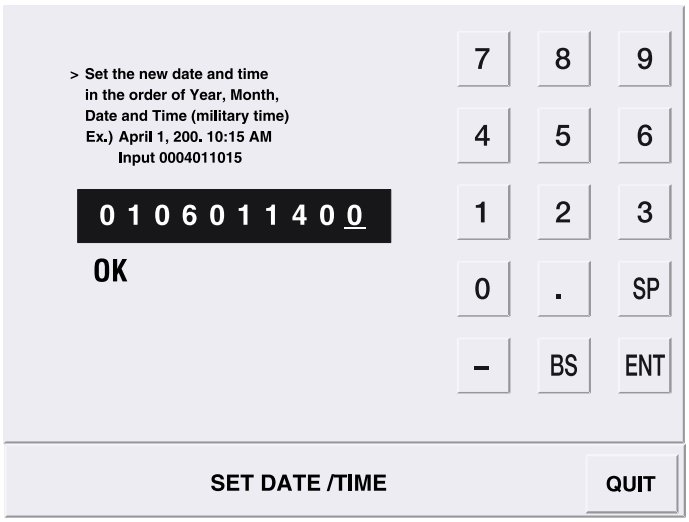
1 When the SET DATE / TIME SET DATE/TIME key is touched, the following date/time setting screen will be displayed. (The current set date and time are displayed in the input column.) Following the example on the screen, input the current date and time. After inputting the date and time, touch the ENT key to finalize it. (If there is a mistake in your input or when you wish to delete the displayed value, touch the BS (backspace) key and the cursor will move one character back.)

[Fig. 3.8] SET DATE/TIME Screen



2 When the modification has been accepted, "**OK**" will be displayed under the input column. Touch the QUIT key and return to the **User Utility Initial** screen. The device's internal clock will be reset to the date and time modifications made.

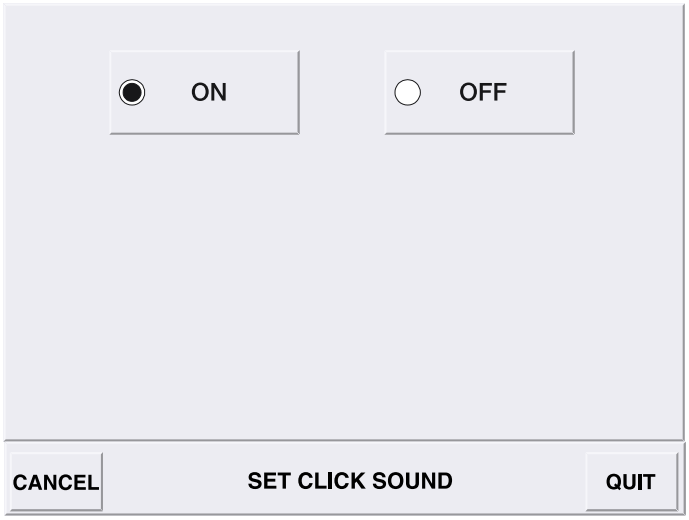
[Fig. 3.9]



3.6 SET CLICK SOUND SET CLICK SOUND

1 When the SET CLICK SOUND key is touched, the following click sound setting screen will be displayed, enabling the click sound to be set ON/OFF for on-screen key touching and caution alerts.

[Fig. 3.10] SET CLICK SOUND Screen

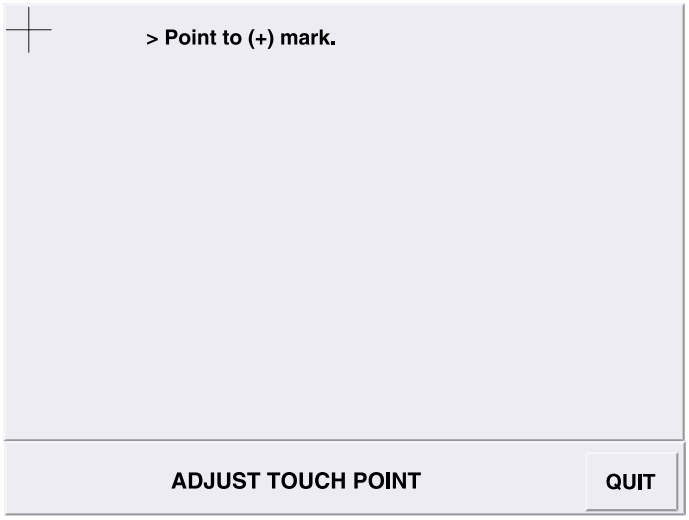


2 Set by touching either the ○ ON key (to turn the click sound ON) or the ○ OFF key (to turn the click sound OFF). ○ will change to ◉. After setting, touch the QUIT key to return to the **User Utility Initial** screen.

3.7 ADJUST TOUCH POINT ADJUST TOUCH POINT

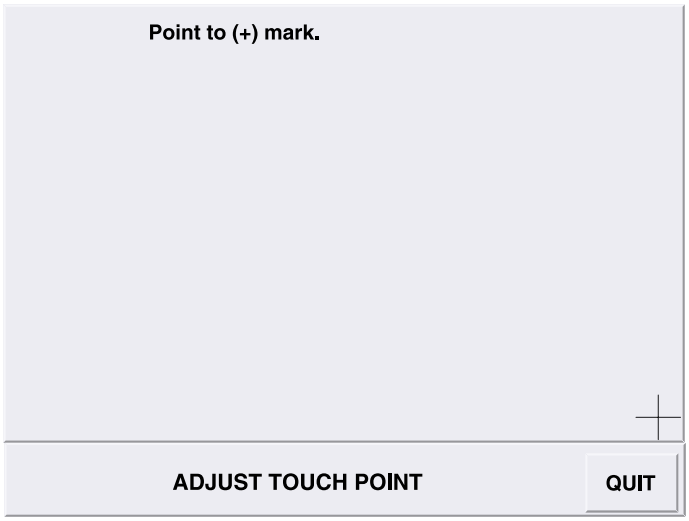
1 When the ADJUST TOUCH POINT key is touched, the ADJUST TOUCH POINT screen will be displayed.
Touch (point) the "+" mark on the upper left according to the message.

[Fig. 3.11] ADJUST TOUCH POINT Screen



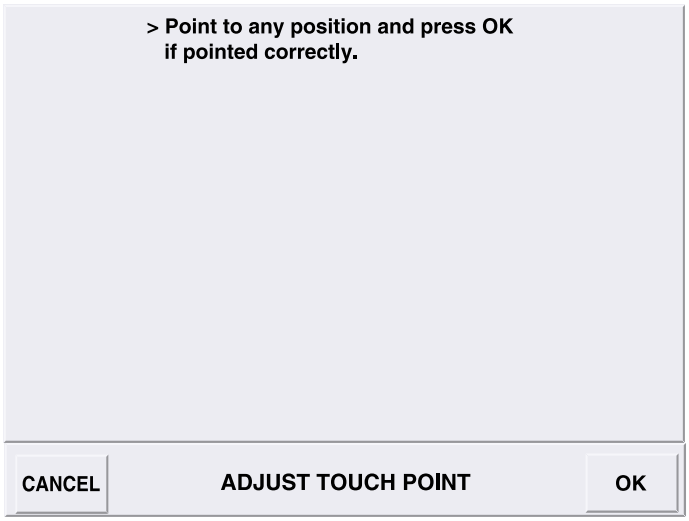
2 The "+" mark on the upper left disappears and it will be displayed on the lower right.
Touch (point) the "+" mark on the lower right.

[Fig. 3.12]



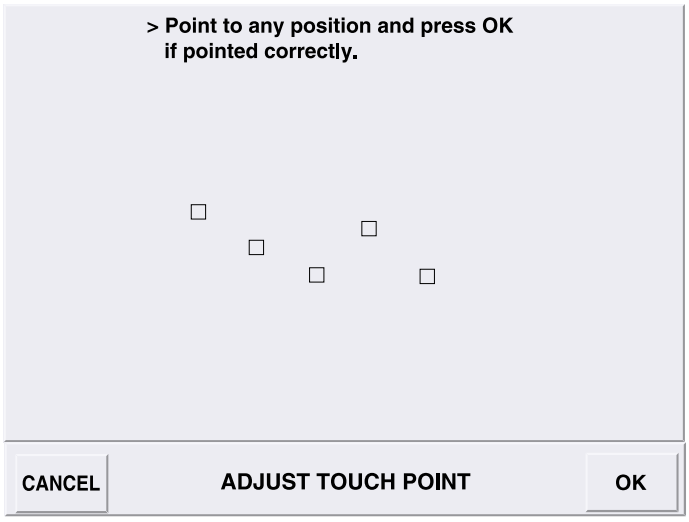
3 Touch (point) any position on the display according to the mesage.

[Fig. 3.13]



4 Whenever a position is touched on the display, square(s) (□) will appear on or around the touched position.
If touched position and □ position match with each other, touch the OK key and return to the **User Utility Initial** screen. If not, make adjustment again.

[Fig. 3.14]

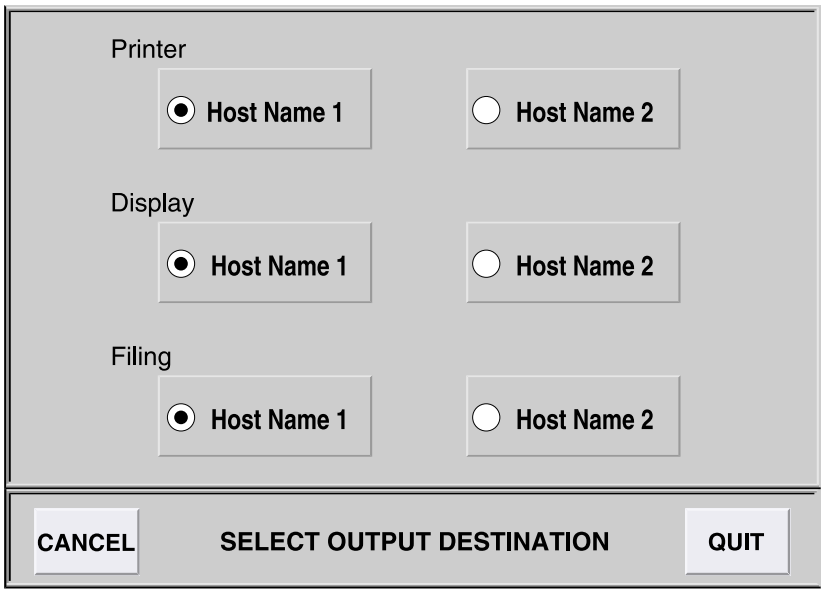


3.8 SELECT OUTPUT DESTINATION SELECT OUTPUT DESTINATION

When using the CR Console, this function is not available.

When the SELECT OUTPUT DESTINATION SELECT OUTPUT DESTINATION key is touched, the following selection screen will be displayed.
Select the destination device(s). After selecting, touch the QUIT key to return to the **User Utility Initial** screen.

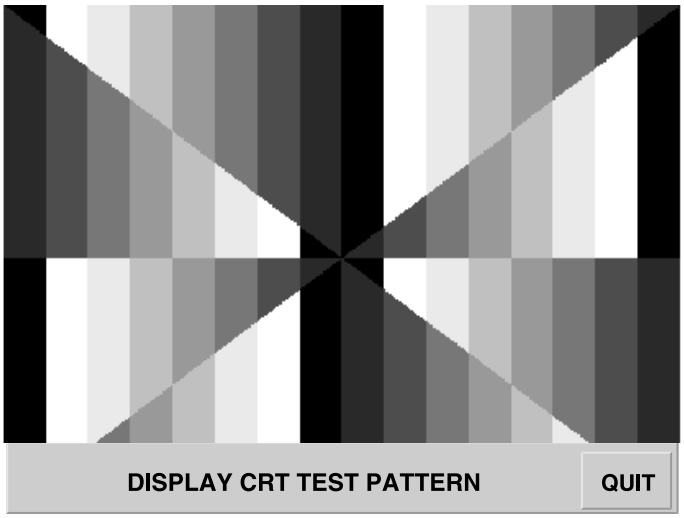
[Fig. 3.15] SELECT PRINTER Screen



3.9 DISPLAY CRT TEST PATTERN DISPLAY CRT TEST PATTERN

When the DISPLAY CRT TEST PATTERN key is touched, a test pattern like the following will be displayed.

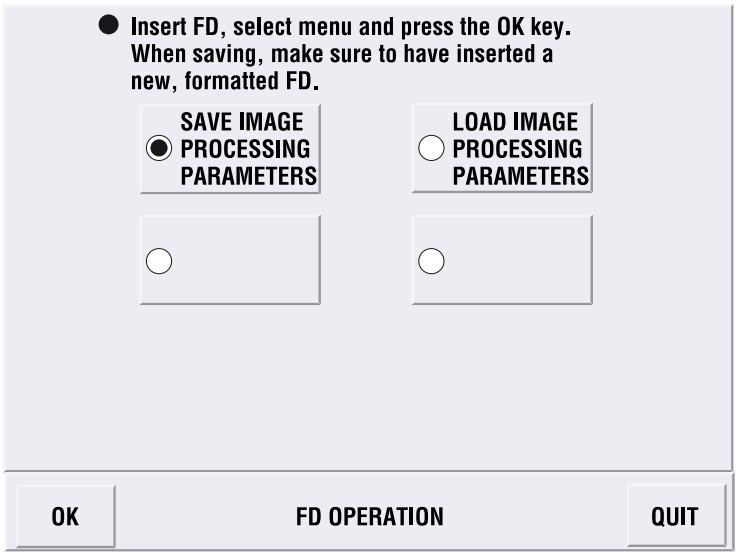
【Fig. 3.16】 DISPLAY CRT TEST PATTERN Screen



3.10 SAVE/LOAD PARAMETERS SAVE/LOAD PARAMETES

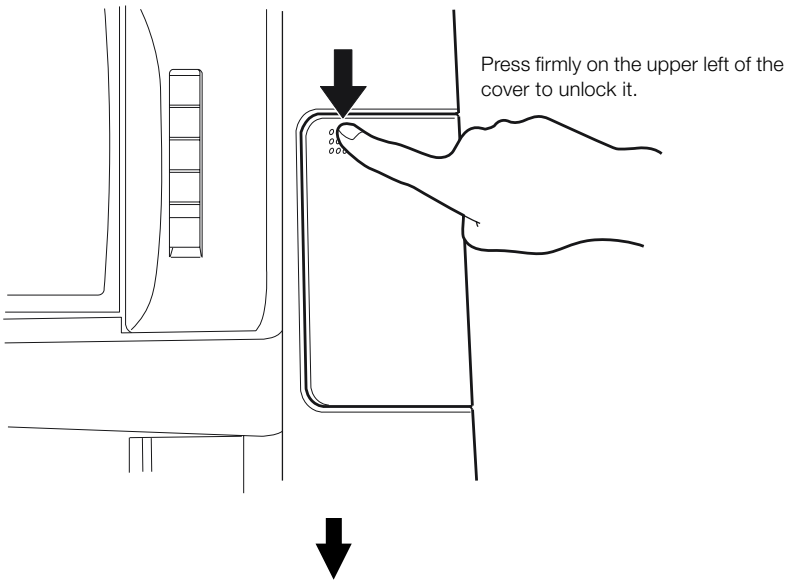
1 When the SAVE/LOAD PARAMETERS key is pressed, the following FD operation screen will be displayed.

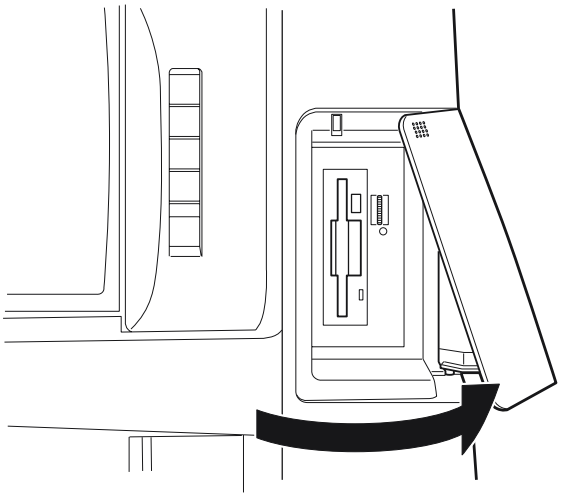
[Fig. 3.17] FD Operation Screen


Insert FD, select menu and press the OK key.
When saving, make sure to have inserted a new, formatted FD.
SAVE IMAGE PROCESSING PARAMETERS
LOAD IMAGE PROCESSING PARAMETERS
OK
FD OPERATION
QUIT

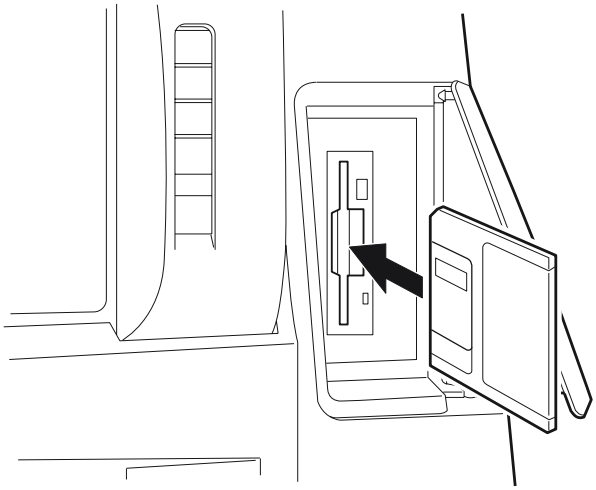
2 If saving device internal image processing parameters to a floppy disk, insert a new, formatted floppy disk into the device.
If loading image processing parameters into the device, insert each floppy disk containing parameters into the device.

[Fig. 3.18] Inserting a Floppy Disk into the Device





Open the cover toward you, with the upper right being held to the device unit.



Insert the disk with the label on the left side.

3 Press the key for the desired selection. (◯ will change to ●.) Then, press the OK key.

4 "OK" is displayed at the end signifies normal completion. When "FAILURE" is displayed, either the disk was not formatted, there was no data on it, it was protected or there was some other problem with it. Remove the disk, confirm what the problem was and then repeat the operation.

!! As file names for data are taken as fixed, if when saving a file another file having the same name exists, the existing file will be overwritten and the new file saved.

5 After completing saving and loading, remove the floppy and close the cover.

6 Lastly, press the QUIT key and return to the processing status display. Hereafter, processing will be done with the new parameters.

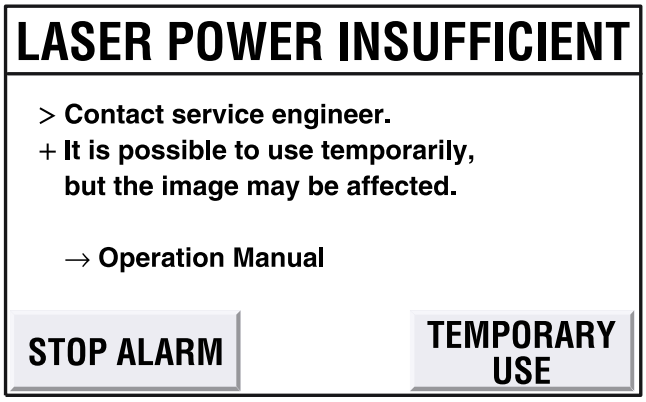
Chapter **4**

4

If "➡ Operation Manual" is displayed

4.1 Laser Power Insufficient

[Fig. 4.1]



Cause The laser is damaged.

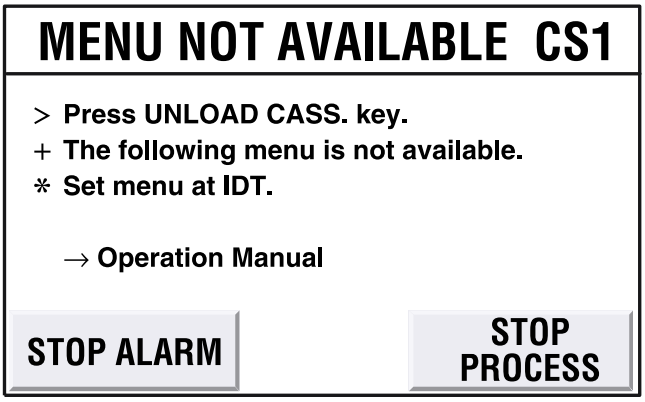
Countermeasure

1 Touch the STOP ALARM key to stop the alarm.

2 By touching the TEMPORARY USE key, it is possible to read temporarily, even though the output image quality will be that when the same exposure was conducted with X-ray dose smaller by 20%.

4.2 Menu Not Available

[Fig. 4.2]


MENU NOT AVAILABLE CS1
> Press UNLOAD CASS. key.
+ The following menu is not available.
* Set menu at IDT.
→ Operation Manual
STOP ALARM
STOP PROCESS

Cause The menu has not been registered on the FCR 5000 plus.

Countermeasure

1 Touch the STOP ALARM key to stop the alarm.

2 Shortly after touching the STOP PROCESS key, the same key will change to UNLOAD CASS..

MENU NOT AVAILABLE CS1
> Press UNLOAD CASS. key.
+ The following menu is not available.
* Set menu at IDT.
→ Operation Manual
STOP ALARM
UNLOAD CASS.

3 Touch the UNLOAD CASS. key to unload the cassette.

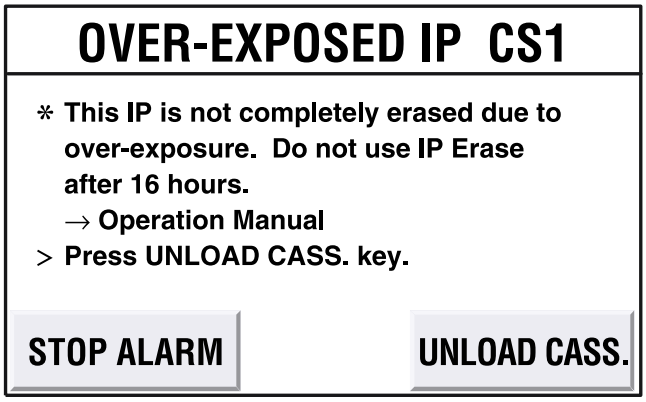
4 Upload the menu in the ID Terminal or the CR Console (See **ID Terminal Operation Manual** or **CR Console Operation Manual** for details.)

5 After the menu is uploaded, insert the cassette again.

!! Never turn OFF the FCR 5000 plus when "IDT Utility" is displayed.

4.3 Over-exposed IP

[Fig. 4.3]


OVER-EXPOSED IP CS1
* This IP is not completely erased due to over-exposure. Do not use IP Erase after 16 hours.
→ Operation Manual
> Press UNLOAD CASS. key.
STOP ALARM
UNLOAD CASS.

Cause An over-exposed IP has been found in the cassette.

Countermeasure

1 Touch the STOP ALARM key to stop the alarm. Touch the UNLOAD CASS. key as instructed by the message.

2 Cassette will be released. Remove the cassette.

3 Leave the ejected cassette (IP) unused for about 16 hours.

4 After about 16 hours, submit the IP to primary erasure. (For details of primary erasure, see **2.5 Conducting Image Erasure Only [PRIMARY ERASURE]**, on page 2-13.)

5 Remove the cassette after completing primary erasure.

Appendix **A**

Specifications

1 Processing Capacity

(1) Processing Capacity

	With FL-IM D
14 × 17" (35 × 43cm)	Approx. 109 IPs / hr.
14 × 14" (35 × 35cm)	Approx. 115 IPs / hr.
10 × 12"	Approx. 128 IPs / hr.
8 × 10"	Approx. 150 IPs / hr.
24 × 30cm (ST)	Approx. 128 IPs / hr.
18 × 24cm (ST)	Approx. 156 IPs / hr.
24 × 30cm (HR)	Approx. 100 IPs / hr.
18 × 24cm (HR)	Approx. 120 IPs / hr.

Applicable when X-ray dose is the same as chest exposure done with Hi-screen B-2/New RX for ST.

(2) Total Processing Time

For the FL-IM D: Approx. 110 sec. (with 14"×14" (35×35cm) size IP, from cassette insertion to film output)

2 Image Reading

(1) Available IP types and sizes

1. Inch settings ST-V / ST-VN (standard type): 14"×17", 14"×14", 10"×12", 8"×10"
2. Metric settings ST-V / ST-VN (standard type): 35×43 cm, 35×35 cm, 24×30 cm, 18×24 cm
   HR-V (high resolution type): 24×30 cm, 18×24cm

!! HR-V18×24cm IPs can only be used with metric settings, with 18×24M cassettes.

(2) IP auto feed/load mechanism cycle time

	IP auto feed/load mechanism cycle time
14 × 17" (35 × 43cm)	Approx. 62 sec.
14 × 14" (35 × 35cm)	Approx. 55 sec.
10 × 12"	Approx. 50 sec.
8 × 10"	Approx. 40 sec.
24 × 30cm (ST)	Approx. 50 sec.
18 × 24cm (ST)	Approx. 38 sec.
24 × 30cm (HR)	Approx. 57 sec.
18 × 24cm (HR)	Approx. 48 sec.

Applicable when X-ray dose is the same as chest exposure done with Hi-screen B-2/New RX for ST.
(When the maximum dose applied to the IP exceeds 85mR for ST or 1700mR for HR, the cycle time will increase in accordance with the increase in dose. The above times are for processing one cassette.)

(3) Reading gray scale 10 bits/pixel

(4) Reading Specification

Reading Size		14" × 17"	14" × 14"	10" × 12"	8" × 10"	24 × 30cm	18 × 24cm
Standard Pixel-density	Sampling Rate (pixels / mm)	5	5	6.7	10	6.7	10
	Number of Pixels	1760 × 2140	1760 × 1760	1670 × 2010	2000 × 2510	1576 × 1976	1770 × 2370
High Pixel-density	Sampling Rate (pixels / mm)	10	10	10	10	10	10
	Number of Pixels	3520 × 4280	3520 × 3520	2505 × 3015	2000 × 2510	2364 × 2964	1770 × 2370

3 Image Output

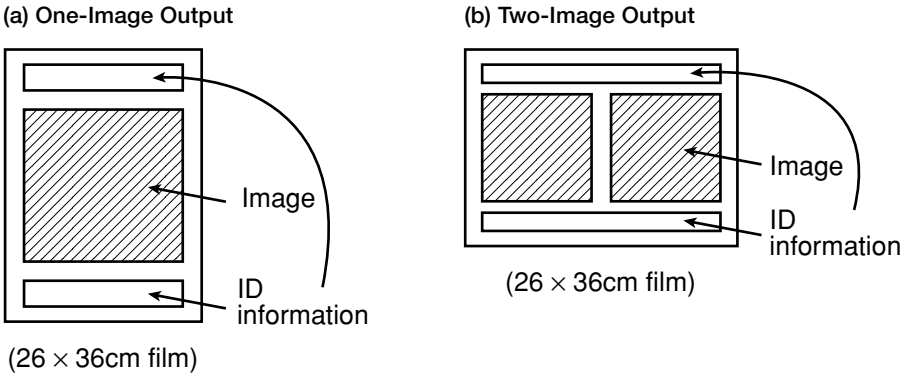
(1) Film output at the Image Recorder

Connection to the Image Recorder will make it possible to obtain hard copy in the following image reduction ratios and formats.

● For standard pixel-density images

Reading size	Reduction ratio	
	Two-image output	One-image output
14 × 17" (35 × 43cm)	50%	67%
14 × 14" (35 × 35cm)	50%	67%
10 × 12"	67%	100%
8 × 10"	86%	100%
24 × 30cm	67%	100%
18 × 24cm	86%	100%

[Fig. A.1]



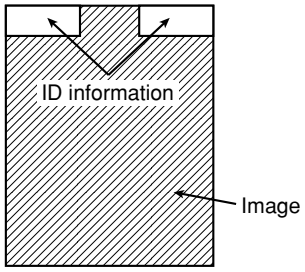
● For high pixel-density images

Reading size	Reduction ratio	
	Two-image output	One-image output
14 × 17" (35 × 43cm)	50%	100%
14 × 14" (35 × 35cm)	50%	100%
10 × 12"	67%	100%
8 × 10"	86%	100%
24 × 30cm	67%	100%
18 × 24cm	86%	100%

For one-image output using 14"×17" or 14"×14" IPs, images are output on 14"×17" size film. In other cases, images are output on 26x36cm size film.

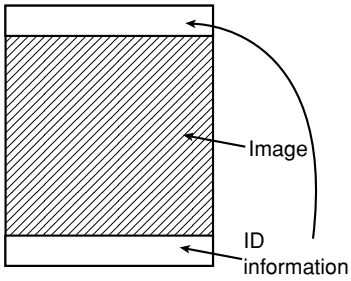
[Fig. A.2]

(a) 14"x17" One-Image Output



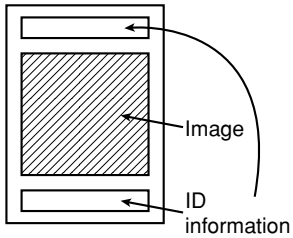
(14"×17" film)

(b) 14"x14" One-Image Output



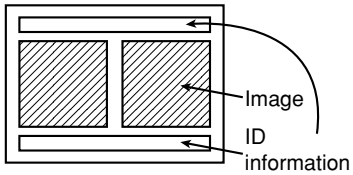
(14"×17" film)

(c) One-Image Output using IPs of other sizes



(26×36cm film)

(d) Two-Image Output



(26×36cm film)

4 Power Supply Conditions

Image reader (CR-IR341P)

Single phase 50/60Hz: 120−240VAC±10%
6.7−3.3A

5 Environmental Conditions

(1) Operating Conditions

Temperature: 15-30°C
Humidity: 40-80%RH (No dew condensation)

(2) Non-Operating Conditions

Temperature: 0-45°C
Humidity: 10-90%RH (No dew condensation)

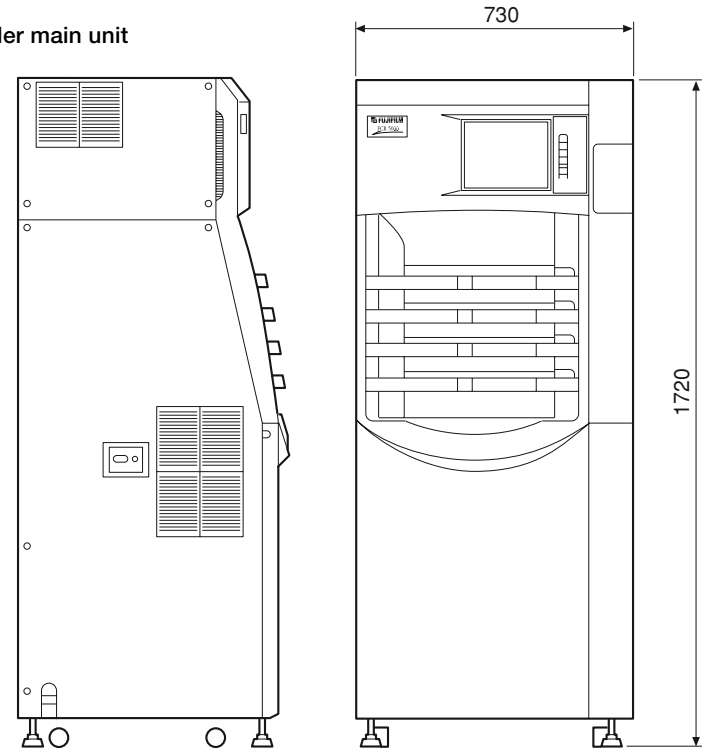
6 External Dimensions and Weight

Width (mm)	730
Depth (mm)	720
Height (mm)	1720
Weight (kg)	310

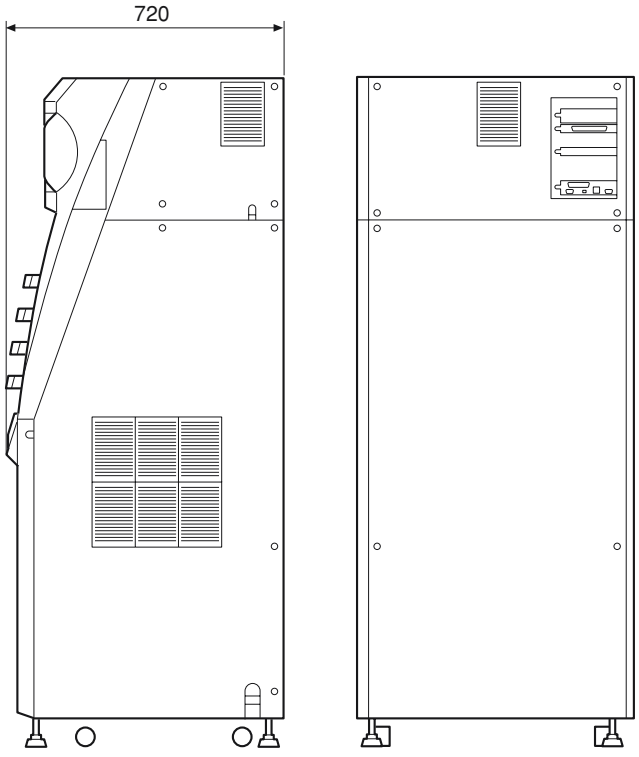
!! Dimensions and weight are approximate and are subject to change without prior notice.

7 External View

[Fig. A.3] Image Reader main unit



<Left-side> <Front>



<Right-side> <Rear>

Appendix **B**

IP Handling

1 IP Erasure Processing

1.1 Secondary Erasure

Even when stored in a room, an IP is very sensitive and absorbs and accumulates natural radioactivity such as cosmic rays or radiation energy emanating from radioisotopes contained in construction materials such as those used for floors and walls. Perform secondary erasure for IPs which have not been used that day.

For the detailed operation procedure, refer to Chapter 2, section 2.4, **Conducting Exposure Using a Cassette (IP) Left Unused for 8 Hours or More [SECONDARY ERASURE]**.

1.2 Primary Erasure

The following IPs must always be submitted to primary erasure prior to use for exposure.

(1) Over-exposed IP
(2) Incorrectly exposed IP

For the detailed operation procedure, refer to Chapter 2, section 2.5, **Conducting Image Erasure Only [PRIMARY ERASURE]**, and Chapter 4, section 4.3, **Over-exposed IP**.

2 Storage Conditions/Daily Maintenance

2.1 Storage Conditions

(1) Store IPs under the following environmental conditions.
Packed : Under 35℃
Unpacked : Under 33℃ and 80% RH
(2) Store IPs in a place where they are not exposed to direct sunlight or excessive ultraviolet rays or various radioactive rays.
(3) Do not bend IPs or impose strong force on them.

2.2 Daily Maintenance

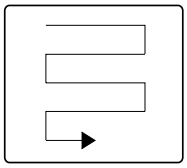
(1) Do not use damaged IPs because image diagnosis can be affected.
(2) Handle IPs as carefully as possible. Do not damage or stain IPs.
(3) Do not bend IPs, hit them against some other objects or drop on the floor or table.

2.3 Cleaning

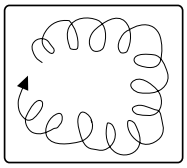
(1) Materials required
Lint free non-woven cotton
Gauze (100% cotton),
Lens cleaner such as Toraysee®

(2) Method

1 With a dry cloth of materials listed above, wipe off the IP surface as illustrated below (A or B).



A



B

2 For stains which fail to come off by cleaning with dry cleaning cloths, dampen the above cloth with ethanol anhydride (JIS standards or special standards) before cleaning. (Do not use another cleaning agent.)

When the IP surface has been cleaned using ethanol anhydride-dampened cloths, slightly wipe it off with dry cloths listed above. Make sure the surface of the IP is completely dry before use.

!! Frequent cleaning with ethanal anhydride can cause yellowing of the IP edges.

(3) Precautions

1 Be sure not to damage the IP.
2 Never use eraser or any other solvents.
3 Do not scratch the IP with your nails.

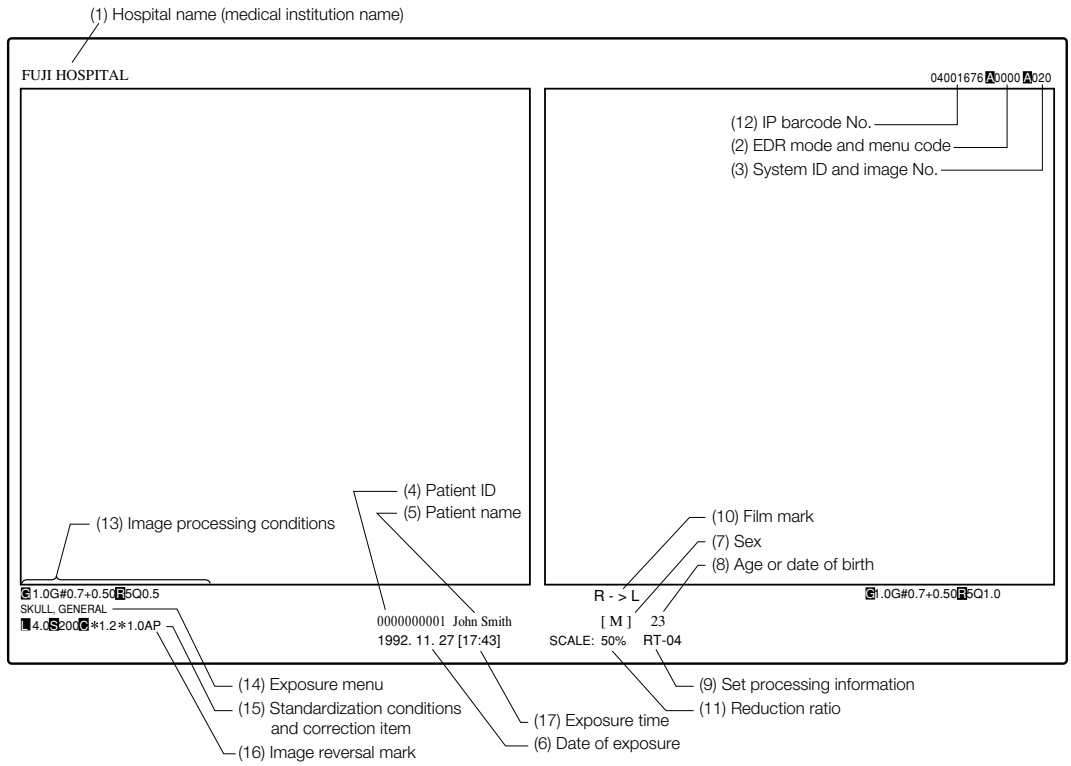
!! Do not apply light to the IP exposed but not yet processed.

Appendix **C**

Film Annotation

Basic layout of the film annotation printed on output film and the meanings are explained below.

[Fig. C.1] Initially Set Film Annotation



!! Character display position can differ slightly from the sample above.

[Table. C-1] Initially Set Film Annotaiton

Name	Meaning
(1) Hospital name (medical institution name)	The name of the hospital (or medical institution) will be displayed.
(2) EDR mode and menu code	The EDR mode and the menu code will be displayed. (* Only the menu code will be displayed in the Standard Film Annotation.)
(3) System ID and image No.	The system ID is an identification code particular to the Image Reader, which will be displayed in reverse video by one of the letters from A to Z. The image no. displayed in three digits represents a serial no. that indicates order of image reading of the day.
(4) Patient ID	The patient ID will be displayed.
(5) Patient name	The patient name will be displayed.
(6) Date of exposure	The date of exposure will be displayed.
(7) Sex	Female or male will be displayed.
(8) Age or date of birth	Either age or date of birth will be displayed.
(9) Set processing information	The batch processing information will be displayed.
(10) Film mark	The exposure direction will be displayed.
(11) Reduction ratio	The reduction ratio of the image will be displayed.
(12) IP barcode No.	The IP barcode No. will be displayed.
(13) Image processing conditions	The image processing conditions according to the selected exposure menu will be displayed.
(14) Exposure menu	The exposure menu will be displayed.
(15) Standardization conditions and correction item	The standardization conditions for latitude and system sensitivity will be displayed.
(16) Image reversal mark	Displayed when the image is reversed.
(17) Exposure timel	The time when the IP was registered at the ID Terminal or the CR Console will be displayed.

Appendix **Y**

Exposed Anatomical Regions/ Applicable Menus/Display Parameters

[Head 1]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Plain	1	0000	SKULL, AP/PA (PA)	Observation of the entire skull and facial bone, entire cerebral ventricles and paranasal sinus, and gnathic joint and Turkish saddle by the Towne projection and Caldwell method	
	1	0001	SINUS, WATER'S/CALD (PA)	Observation of the nasal cavity and its surroundings by the Waters method	
	1	0002	MANDIBLE, OBLIQUE (AP)	Observation of the mandible	
	1	0003	ORBIT (AP)	Observation of the orbit and optic canal	
	1	0004	HEAD, SOFT TISSUE (PA)	Observation of the cephalic soft part and mastoid process	
	1	0006	SKULL, PEDIATRICS (PA)	Observation of the entire skull of infants (3 or less years of age)	
	1	000B	MASTOIDS (AP)	Observation of the ear by the Schüler method, Sonnenkalb position, Stenvers projection, Meyer method, and other methods	
	1	000C	SKULL, S.M.V. (AP)	Cephalic exposure by axial projection	
	1	000D	CEPHALOGRAPHY (AP)	Routine cephalic exposure	
	1	000E	ZYGOMATIC ARCHES (AP)	Exposure of the lateral portion of the zygomatic bone	
	1	001E	NASAL BONES, LAT. (AP)	Exposure of the lateral portion of the nasal bone	
	1	0010	SKULL, LATERAL (PA)	Observation of the entire skull and facial bone, entire cerebral ventricles and paranasal sinus, and gnathic joint and Turkish saddle by the Towne projection and Caldwell method	
	1	0011	SINUS, LATERAL (PA)	Observation of the nasal cavity and its surroundings by the Waters method	
	1	0020	SKULL, TOWNS (PA)	Observation of the entire skull by the Towne projection	
	1	0021	FACIAL BONES (PA)	Observation of the facial bones.	
	1	0031	FACIAL BONES, LAT. (PA)	Observation of the facial bones.	
	1	0041	PRE-MRI ORBITS (PA)		

EDR mode						Display Parameter																			
Auto		Semi		Fix	Preset	Two-image Display																			
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
4S	II	II	2.2	200	A	1.2	G	0.7	0.5	5	Q	0.5	1.0	A	0.7	0.2	5	Q	7.0	1.0	G	0.7	0.5	5	Q	0.5
4S	II	II	2.2	200	A	1.2	G	0.7	0.3	4	T	0.5	0.9	A	0.6	0.0	4	T	5.0	1.2	G	0.9	0.3	4	T	0.5
4S	II	II	2.2	200	A	1.0	F	0.9	-0.1	5	T	0.5	0.9	A	0.9	-0.2	5	T	5.0	1.0	F	0.9	-0.1	5	T	0.5
4S	II	II	2.2	200	A	1.2	G	0.9	0.3	4	T	0.5	0.9	A	0.8	0.0	4	T	5.0	1.2	G	0.9	0.3	4	T	0.5
-	IV	II	2.6	200	A	1.0	G	2.0	-0.5	2	Q	0.5	1.0	A	2.1	-0.3	2	Q	3.0	1.0	G	2.0	-0.5	2	Q	0.5
4S	I	III	2.2	200	A	1.2	G	0.7	0.4	4	R	0.3	0.9	A	0.6	0.0	4	R	3.0	1.2	G	0.7	0.4	4	R	0.3
4S	II	II	2.2	200	A	1.2	H	0.9	0.4	4	T	0.5	0.9	A	0.7	0.1	4	T	5.0	1.0	H	0.9	0.4	4	T	1.0
4S	II	II	2.2	200	A	1.2	G	0.7	0.4	5	Q	0.5	1.0	A	0.7	0.1	5	Q	7.0	1.0	G	0.7	0.4	5	Q	0.5
4S	I	II	2.2	200	S	0.8	G	0.7	0.4	8	T	5.0	0.8	A	0.7	-0.1	8	T	15.0	0.8	G	0.7	0.4	8	T	5.0
-	IV	II	2.6	200	A	1.0	G	2.0	0.3	5	Q	0.5	1.0	A	2.1	0.3	5	Q	6.0	1.0	G	2.0	0.3	5	Q	0.5
-	IV	II	2.6	200	A	1.0	G	2.0	-0.5	5	Q	0.5	1.0	A	2.1	-0.3	5	Q	6.0	1.0	G	2.0	-0.5	5	Q	0.5
4S	II	II	2.2	200	A	1.2	G	0.7	0.5	5	Q	0.5	1.0	A	0.7	0.2	5	Q	7.0	1.0	G	0.7	0.5	5	Q	0.5
4S	II	II	2.2	200	A	1.2	G	0.7	0.3	4	T	0.5	0.9	A	0.6	0.0	4	T	5.0	1.2	G	0.9	0.3	4	T	0.5
4S	II	II	2.2	200	A	1.2	G	0.7	0.5	5	Q	0.5	1.0	A	0.7	0.2	5	Q	7.0	1.0	G	0.7	0.5	5	Q	0.5
4S	II	II	2.2	200	A	1.2	G	0.7	0.3	4	T	0.5	0.9	A	0.6	0.0	4	T	5.0	1.2	G	0.9	0.3	4	T	0.5
4S	II	II	2.2	200	A	1.2	G	0.7	0.3	4	T	0.5	0.9	A	0.6	0.0	4	T	5.0	1.2	G	0.9	0.3	4	T	0.5
4S	II	II	2.2	200	A	1.2	G	0.7	0.3	4	T	0.5	0.9	A	0.6	0.0	4	T	5.0	1.2	G	0.9	0.3	4	T	0.5

Gradation Processing: Rotation Amount (GA), Gradation Type (GT), Rotation Center (GC), Gradation Shifting Amount (GS)
Frequency Processing: Frequency Rank (RN), Frequency Type (RT), Frequency Enhancement (RE)

[Head 2]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Contrast	1	1000	HEAD, BL. VESSEL :C (AP)	Cephalic blood vessel exposure with a contrast medium	
	1	1002	PARANASAL SINUS :C (AP)	Exposure with a contrast medium of the paranasal sinuses, the rhinopharynx and oropharynx, and the nasal cavity and nasolacrimal duct	
	1	1004	SALIVARY GLANDS :C (AP)	Parotic, sublingual, and sublingual gland exposure with a contrast medium	
Tomography	1	2000	PARANASAL SINUS :T (AP)	Tomography of paranasal sinus	
	1	2001	EAR :T (PA)	Tomography of inner and middle ear	
	1	2002	SELLA TURCICA :T (PA)	Tomography of turkish saddle	
	1	2003	MANDIBULAR JOINTT :T (AP)	Tomography of gnathic joint and mandible	
Plain	2	0009	PANAGRAPHY (PA)	Panagraphy	
	2	0016	SKULL, PED. -1 (PA)	Tomography of the entire skull of infants by low-dose exposure	
Tomog-raphy	2	2004	PANTOMO. :T (PA)	Pantomography	
Magnifi-cation	2	6001	HEAD, MAG :M (PA)	Magnification and magnification tomography of the inner ear, auditory ossicle, and other organs with 3× or higher power	

EDR mode						Display Parameter																		
Auto		Semi		Fix	Preset	Two-image Display																		
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
4S	II	II	2.2	200	A	1.2	G	0.7	0.6	5	T	1.0	1.0	A	0.5	0.1	5	T	7.0	1.0	G	0.7	0.6	5	T	1.5
4S	II	II	2.2	200	A	1.2	G	0.7	0.5	4	R	1.0	1.0	A	0.5	0.0	4	R	7.0	1.0	G	0.7	0.5	4	R	1.5
4S	II	II	2.2	200	A	1.2	G	0.7	0.1	5	R	1.0	1.0	A	0.6	0.0	4	R	7.0	1.0	G	0.7	0.1	5	R	1.5
4S	II	II	2.2	200	A	1.2	I	0.9	0.5	4	R	1.0	1.0	A	0.6	0.0	4	R	7.0	1.2	I	0.9	0.5	4	R	1.5
4S	II	II	2.2	200	A	1.2	I	0.9	0.5	4	R	1.0	1.0	A	0.6	0.0	4	R	7.0	1.2	I	0.9	0.5	4	R	1.0
4S	II	II	2.2	200	A	1.2	I	0.9	0.5	4	R	1.0	1.0	A	0.6	0.0	4	R	7.0	1.2	I	0.9	0.5	4	R	1.0
4S	II	II	2.2	200	A	1.2	I	0.9	0.5	4	R	1.0	1.0	A	0.6	0.0	4	R	7.0	1.2	I	0.9	0.5	4	R	1.0
1	II	II	2.0	200	A	1.2	G	0.7	0.4	7	X	0.4	1.2	G	0.7	0.4	7	R	0.0	1.2	G	0.7	0.4	7	X	0.4
4	I	III	2.2	200	A	1.0	E	1.2	0.0	5	Q	0.5	1.0	A	1.3	0.0	5	Q	6.0	1.0	A	1.2	0.0	5	Q	6.0
1	II	II	2.2	200	A	1.1	E	1.2	0.2	7	Q	0.5	1.0	A	1.2	0.0	7	Q	3.0	1.2	A	1.2	0.0	7	Q	6.0
4	II	I	2.2	200	S	1.2	I	0.9	0.5	3	R	1.0	1.0	A	0.6	0.0	3	R	5.0	1.2	I	0.9	0.5	3	R	1.0

Gradation Processing
- Rotation Amount (GA)
- Gradation Type (GT)
- Rotation Center (GC)
- Gradation Shifting Amount (GS)

Frequency Processing
- Frequency Rank (RN)
- Frequency Type (RT)
- Frequency Enhancement (RE)

[Neck 1]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Plain	1	0100	SOFT TISSUE NECK AP (AP)	Exposure of the whole neck; observation of the neck from the cervical spine to soft parts Observation of the frontal portion of the pharynx and larynx	
	1	0101	C-SPINE, AP/OBL (AP)	Observation of the cervical spine, except through open mouth	For exposure of cervico-thoracic spine, use the 0201 "THORACIC SPINE, FRN" or 0209 "THORACIC SPINE, LAT" menu.
	1	0102	SOFT TISSUE NECK LAT (AP)	Observation of the lateral portion of the hypopharynx, larynx, and trachea, and thyroid gland	For exposure of the frontal portion, use the 0100 "CERVICAL, GENERAL" menu.
	1	0104	C-SPINE, PEDS (AP)	General view of the neck of infants (3 years old or less)	
	1	0106	C-SPINE, ODONTOID (AP)	Observation through the open mouth	
	1	0111	C-SPINE, LAT. (AP)	Observation of the cervical spine	
	1	0121	C-SPINE LAT. FIXED (AP)	Observation of the cervical spine	
	1	0131	SWIMMERS FIXED (AP)	Observation of the cervical spine by SWIMMERS technique	
Contrast	1	1100	CERVIC. BL, VESSEL :C (AP)	Cervical blood vessel exposure with a contrast medium	For tomography of the cervicothoracic spines, use the 2203 "THORA.SPINE, FRN" or 2204 "THORA SPINE, LAT" menu.
	1	1101	PHARYNX/LARYNX :C (AP)	Larynx, hypopharynx, and thyroid gland exposure with a contrast medium	
	1	1102	CERVIC, ESOPHAGUS :C (AP)	Exposure of the neck from the hypopharynx to the upper portion of the esophagus with barium	
Tomography	1	2100	CERVICAL SPINE :T (AP)	Tomography of cervical spine	
	1	2102	PHARYNX/LARYNX :T (AP)	Tomography of the hypopharynx, larynx, and upper portion of the trachea	

EDR mode						Display Parameter																			
Auto		Semi		Fix	Preset	Two-image Display																			
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
4S	I	II	2.4	200	A	0.9	F	0.6	0.3	4	R	0.5	1.0	A	0.7	0.1	4	R	5.0	0.9	F	0.6	0.3	4	R	0.5
4S	II	II	2.4	200	A	1.1	F	0.6	0.5	5	P	0.5	1.0	A	0.5	0.1	5	P	5.0	1.1	F	0.6	0.5	5	P	0.5
4S	I	II	2.4	200	A	1.0	I	0.6	0.3	4	R	0.5	1.0	A	0.7	0.1	4	R	5.0	1.0	I	0.6	0.3	4	R	0.5
4S	I	III	2.4	200	A	1.3	F	0.7	0.0	4	R	0.3	0.9	A	0.6	0.0	4	R	3.0	1.3	F	0.7	0.0	4	R	0.3
4S	II	II	2.2	200	A	1.2	G	0.7	0.5	5	Q	0.5	1.0	A	0.7	0.2	5	Q	7.0	1.0	G	0.7	0.5	5	Q	1.0
4S	II	II	2.4	200	A	1.0	F	0.6	0.5	5	P	0.5	1.0	A	0.5	0.1	5	P	5.0	1.0	F	0.6	0.3	5	P	0.5
4S	II	II	2.4	200	A	1.0	F	0.6	0.0	5	P	0.5	1.0	A	0.5	0.1	5	P	5.0	1.0	F	0.6	0.0	5	P	0.5
4S	II	II	2.4	200	A	1.0	F	0.6	0.0	5	P	0.5	1.0	A	0.5	0.1	5	P	5.0	1.0	F	0.6	0.0	5	P	0.5
4S	I	II	2.4	200	A	1.0	I	0.6	0.8	4	P	1.0	1.0	A	0.5	0.3	4	P	5.0	1.0	I	0.6	0.8	4	P	1.0
4S	I	II	2.4	200	A	1.0	I	0.6	0.4	4	R	1.0	1.0	A	0.7	0.2	4	R	5.0	1.0	I	0.6	0.4	4	R	1.0
4S	II	II	2.4	200	A	1.0	I	0.6	0.4	4	R	1.0	1.0	A	0.7	0.2	4	R	5.0	1.0	I	0.6	0.4	4	R	1.0
1S	II	II	2.4	200	A	1.2	I	0.6	0.5	3	Q	1.0	1.0	A	0.5	0.3	3	Q	5.0	1.0	I	0.6	0.5	3	Q	1.5
1S	I	II	2.6	200	A	1.2	I	0.6	0.4	3	Q	1.0	1.0	A	0.6	0.1	3	Q	5.0	1.0	I	0.6	0.4	3	Q	1.5

Gradation Processing: Rotation Amount (GA), Gradation Type (GT), Rotation Center (GC), Gradation Shifting Amount (GS)
Frequency Processing: Frequency Rank (RN), Frequency Type (RT), Frequency Enhancement (RE)

[Neck 2]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Plain	2	0105	LARYNX(<35KV) (AP)	Observation of the lateral portion of the neck with the thyroid gland as the target (exposure of soft parts with an MO bulb at 35 k V or lower)	
	2	0114	CERVIC., PED.-1 (AP)	General view of the neck of infants by low-dose exposure	
Contrast	2	1105	CERVICAL, MYELO. :C (AP)	Cervical spinal canal, extradural space, and intervertebral disc exposure with a contrast medium	
	2	1106	CERVICAL, LYMPHA :C (AP)	Cervical lymphatic duct and lymph node exposure with a contrast medium	
	2	1107	THORA C., MYELO :C (AP)	Thoracic spinal canal and extradural space exposure with a contrast medium	
Magnification	2	4100	CERVIC., MAG :M (AP)	3× or more magnification of the pharynx, larynx, and other organs	

EDR mode						Display Parameter																		
Auto		Semi		Fix	Preset	Two-image Display																		
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
4S	I	II	2.4	200	A	1.0	I	2.0	-0.2	4	R	0.5	1.0	A	0.9	-0.1	4	R	5.0	1.0	I	2.0	-0.2	4	R	0.5
4S	I	III	2.4	200	A	1.3	F	0.7	0.0	7	X	0.4	1.3	F	0.7	0.0	7	R	0.0	1.3	F	0.7	0.0	7	X	0.4
4S	I	II	2.4	200	A	1.0	F	0.6	0.5	5	P	1.0	1.0	A	0.5	0.1	5	P	5.0	1.0	F	0.6	0.5	5	P	1.0
4S	I	II	2.4	200	A	1.0	I	0.6	0.5	4	P	1.0	1.0	A	0.3	-0.1	4	P	5.0	1.0	I	0.6	0.5	4	P	1.0
4S	I	II	2.4	200	A	1.0	F	0.6	0.5	5	P	1.0	1.0	A	0.5	0.1	5	P	5.0	1.0	F	0.6	0.5	5	P	1.0
4	II	I	2.4	200	S	1.0	I	2.0	0.3	3	R	1.0	1.0	A	1.9	0.4	3	R	5.0	1.0	I	2.0	0.3	3	R	1.0

Gradation Processing
- Rotation Amount (GA)
- Gradation Type (GT)
- Rotation Center (GC)
- Gradation Shifting Amount (GS)

Frequency Processing
- Frequency Rank (RN)
- Frequency Type (RT)
- Frequency Enhancement (RE)

[Chest 1]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Plain	1	0200	CHEST, PA (PA)	Plain thoracic exposure; observation of the lung field and mediastinum for shadows	
	1	0201	T-SPINE, AP (AP)	Observation of the thoracic and cervicothoracic spines	For exposure of the thoracolumbar spine, use the 0501 "LUMBAR SPINE" menu and for exposure of the lung, adjust the radiation field as small as double the size of the thoracic spine.
	1	0209	T-SPINE, LAT. (AP)	Observation of the thoracic and cervicothoracic spine (this menu is used only when the enface radiogram is different in density from the oblique radiogram in particular)	For exposure of the cervicothoracic spine, use the 0501 "LUMBAR SPINE" menu.
	1	0202	RIBS, UPPER (AP)	Observation of the superior ribs	
	1	0203	RIBS, LOWER (PA)	Observation of the inferior ribs	
	1	0204	CLAVICLE/AC JNTS (AP)	Observation of the clavicle	
	1	0205	SCAPULA, AP (AP)	Observation of the scapula	
	1	0206	STERNUM, PA/OBL (PA)	Observation of the sternum (manubrium, sternal body, and xiphoid process)	
	1	0207	CHEST, PED (0-3YRS) (AP)	Plain thoracic exposure in infants (3 or less years of age)	
	1	020A	STERNUM, LATERAL (AP)	Exposure of thoracic soft parts; observation of the chest wall, axilla, and other sites	
	1	020B	SHOULDER (AP)	Observation of the frontal and peripheral soft parts of the shoulder joint	Use a grid.
	1	020C	AXILLARY SHOULDER (AP)	Observation of the frontal and peripheral soft parts of the shoulder joint	Use a curve cassette or make an exposure in the caudal direction.
	1	020D	WHOLE SPINE/SCOLIO (AP)	Exposure of the whole spine of infants which can be recorded on a 14 × 17" IP	
	1	0212	RIB, UPPER OBL. (AP)	Observation of the superior ribs oblique	
	1	021D	T-SPINE, PEDS (AP)	Observation of the thoracic spines (3 or less years of age)	
	1	0227	CHEST, NEONATE (AP)		
	1	022D	L-SPINE, PEDS (AP)	Observation of the Lumber spines (3 or less years of age)	
	1	0237	CHEST, PED PORT. (AP)	Plain thoracic exposure in infants (3 or less years of age) for portable	

EDR mode						Display Parameter																			
Auto		Semi		Fix	Preset	Two-image Display																			
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
4S	II	IV	2.2	200	A	1.0	E	1.6	0.0	4	R	0.5	0.9	A	1.5	0.0	4	R	5.0	0.9	E	1.6	0.0	4	R	0.5
4S	II	II	2.2	200	A	1.1	G	0.9	0.6	5	T	0.5	1.0	A	0.7	0.2	5	T	5.0	1.1	G	0.9	0.6	5	T	0.5
4S	VI	II	2.2	200	A	1.0	G	0.9	0.1	5	T	0.6	1.0	A	1.0	0.0	5	T	5.0	1.0	G	0.9	0.1	5	T	0.6
4S	II	II	2.2	200	A	0.7	O	0.8	-0.1	5	R	0.5	0.9	A	1.6	-0.1	5	R	5.0	0.7	O	0.8	-0.1	5	R	0.5
4S	II	II	2.2	200	A	0.7	O	0.6	-0.25	5	R	0.5	1.0	A	0.8	0.25	5	R	5.0	0.7	O	0.6	0.25	5	R	0.5
4S	II	II	2.2	200	A	1.2	G	0.6	0.1	5	T	0.5	0.9	A	0.9	0.0	5	T	5.0	1.2	G	0.6	0.1	5	T	0.5
4S	II	II	2.2	200	A	1.2	G	0.6	0.2	5	T	0.5	1.0	A	0.7	0.0	5	T	5.0	1.2	G	0.6	0.2	5	T	0.5
4S	II	II	2.2	200	A	1.0	O	1.6	0.0	5	R	0.5	0.9	A	1.4	-0.1	5	R	7.0	1.0	O	1.6	0.0	5	R	0.5
4S	VI	II	2.2	200	A	1.1	E	1.6	-0.3	3	R	0.0	1.0	A	1.5	-0.6	3	R	1.0	1.3	E	1.6	-0.3	3	R	0.0
-	IV	II	2.6	200	A	1.1	F	0.8	0.6	5	Q	1.0	0.7	A	1.6	0.2	5	Q	7.0	1.1	F	0.8	0.6	5	Q	1.0
4S	VII	II	2.2	200	A	1.1	G	0.6	0.1	5	T	0.5	1.0	A	0.9	0.0	5	T	5.0	1.1	G	0.6	0.1	5	T	0.5
4S	VII	II	2.0	200	A	1.0	O	0.6	0.5	5	T	0.5	1.0	A	0.6	0.2	5	T	5.0	1.0	O	0.6	0.5	5	T	0.5
4S	II	II	2.2	200	A	1.2	G	0.9	0.6	5	T	0.5	1.2	A	0.9	0.2	5	T	5.0	1.0	G	0.9	0.6	5	T	0.5
4S	II	II	2.2	200	A	0.7	O	1.6	-0.2	5	R	0.5	0.7	A	1.6	-0.1	5	R	5.0	0.7	O	1.6	-0.2	5	R	0.5
4S	II	II	2.2	200	A	1.2	G	0.9	0.6	5	T	0.5	1.2	A	0.9	0.2	5	T	5.0	1.0	G	0.9	0.6	5	T	0.5
4S	II	II	2.2	200	A	1.3	O	1.6	-0.4	3	R	0.0	1.0	A	1.5	-0.6	3	R	1.0	1.3	O	1.6	-0.4	3	R	0.0
4S	II	II	2.2	200	A	1.2	G	0.9	0.6	5	T	0.5	1.2	A	0.9	0.2	5	T	5.0	1.0	G	0.9	0.6	5	T	0.5
4S	II	II	2.2	200	A	1.3	O	1.6	-0.4	3	R	0.0	1.0	A	1.5	-0.6	3	R	1.0	1.3	O	1.6	-0.4	3	R	0.0

Gradation Processing: Rotation Amount (GA), Gradation Type (GT), Rotation Center (GC), Gradation Shifting Amount (GS)
Frequency Processing: Frequency Rank (RN), Frequency Type (RT), Frequency Enhancement (RE)

[Chest 2]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Plain	1	0230	CHEST, LATERAL (PA)	Plain thoracic exposure; observation of the lung field and mediastinum for shadows (this menu is used only when the enface radiogram is different in density from the oblique radiogram in particular)	
	1	0240	CHEST, AP NON-GRID (PA)	Plain thoracic exposure; observation of the lung field and mediastinum for shadows without grid	
	1	0250	CHEST, PORTABLE (PA)	Plain thoracic exposure; observation of the lung field and mediastinum for shadows for portable	
	1	0260	CHEST, DECUB. (PA)	Plain thoracic exposure; observation of the lung field and mediastinum for shadows for decubitus	
	1	0270	CHEST, PED (4-10YRS) (PA)	Plain thoracic exposure in infants (4 to 10 years age)	
	1	0280	CHEST, AP (GRID) (AP)	Plain thoracic exposure; observation of the lung field and mediastinum for shadows with grid	
	1	0290	CHEST, LINE PLCMT (PA)	Plain thoracic exposure; observation of the lung field and mediastinum for shadows	
	1	02A0	CHEST, PA X-WISE (PA)	Plain thoracic exposure; observation of the lung field and mediastinum for shadows	
	1	02B0	CHEST PORT X-WISE (PA)	Plain thoracic exposure; observation of the lung field and mediastinum for shadows	
Contrast	1	1200	CHEST, BL. VESSEL :C (AP)	Thoracic blood vessel exposure with a contrast medium	
	1	1201	BRONCHUS :C (AP)	Bronchial exposure with a contrast medium	
	1	1202	CHEST,ESOPHAGUS :C (AP)	Thoracic esophageal exposure with a contrast medium	
Tomography	1	2200	LUNG :T (AP)	Mainly tomography of the lung field; observation of the lung field and rib	
	1	2201	MEDIASTINUM :T (AP)	Mainly tomography of the mediastinum	
	1	2202	STERNUM :T (AP)	Sternal tomography	
	1	2203	THORA. SPINE, FRN :T (AP)	Thoracic spinal tomography	For tomography of the cervicothoracic spines, use the 2500 “LUMBAR SPINE” menu.
	1	2204	THORA, SPINE, LAT :T (AP)	Thoracic spinal tomography (this menu is used when the enface radiogram is different in density from the oblique radiogram)	For tomography of the cervicothoracic spines, use the 2500 “LUMBAR SPINE” menu.
	1	2205	SHOULDER JOINT :T (AP)	Tomography of the shoulder joint and its periphery brachial region	

EDR mode						Display Parameter																		
Auto		Semi		Fix	Preset	Two-image Display																		
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
4S	II	IV	2.2	200	A	1.0	E	1.6	-0.2	4	R	0.5	0.9	A	1.5	-0.2	4	R	5.0	0.8	E	1.6	-0.2	4	R	0.5
4S	II	IV	2.2	200	A	0.9	D	1.6	0.0	4	R	0.5	0.9	A	1.5	0.0	4	R	5.0	0.9	D	1.6	0.0	4	R	0.5
4S	II	IV	2.2	200	A	1.0	D	1.6	0.0	4	R	0.5	0.9	A	1.5	0.0	4	R	5.0	0.9	D	1.6	0.0	4	R	0.5
4S	II	IV	2.2	200	A	1.0	D	1.6	0.0	4	R	0.5	0.9	A	1.5	0.0	4	R	5.0	0.9	D	1.6	0.0	4	R	0.5
4S	II	IV	2.2	200	A	0.9	E	1.6	-0.1	4	R	0.3	0.9	A	1.5	-0.2	4	R	5.0	0.9	E	1.6	-0.1	4	R	0.3
4S	II	IV	2.2	200	A	0.8	E	1.6	0.0	4	R	0.5	0.9	A	1.5	0.0	4	R	5.0	0.8	E	1.6	0.0	4	R	0.5
4S	II	IV	2.2	200	A	0.8	E	1.6	0.0	4	R	0.5	0.9	A	1.5	0.0	4	R	5.0	0.8	E	1.6	0.0	4	R	0.5
4S	II	IV	2.2	200	A	1.0	E	1.6	0.0	4	R	0.5	0.9	A	1.5	0.0	4	R	5.0	0.9	E	1.6	0.0	4	R	0.5
4S	II	IV	2.2	200	A	1.0	D	1.6	0.0	4	R	0.5	0.9	A	1.5	0.0	4	R	5.0	0.9	D	1.6	0.0	4	R	0.5
4S	II	IV	2.2	200	A	1.0	E	1.6	0.2	5	T	1.0	0.9	A	1.3	0.0	5	T	5.0	1.0	E	1.6	0.2	5	T	1.0
4S	II	II	2.2	200	A	1.0	E	1.6	0.0	5	T	1.0	0.9	A	1.3	-0.2	5	T	5.0	1.0	E	1.6	0.0	5	T	1.0
1	II	II	2.2	200	A	1.0	N	0.3	0.1	8	T	1.0	1.0	A	0.7	0.0	8	T	7.0	1.0	N	0.3	0.1	8	T	1.0
1	II	IV	2.2	200	A	1.0	E	1.6	0.0	4	R	1.0	0.9	A	1.4	-0.1	4	R	7.0	1.0	E	1.6	0.0	4	R	1.0
1	II	II	2.2	200	A	1.0	E	1.6	0.4	4	R	1.0	0.9	A	1.3	0.1	4	R	7.0	1.0	E	1.6	0.4	4	R	1.0
1	II	II	2.2	200	A	1.0	E	1.6	0.4	4	R	1.0	0.9	A	1.3	0.1	4	R	7.0	1.0	E	1.6	0.4	4	R	1.0
1	II	II	2.2	200	A	1.1	G	0.9	0.6	4	T	1.0	1.0	A	0.7	0.2	4	T	7.0	1.1	G	0.9	0.6	4	T	1.0
1	II	II	2.2	200	A	1.0	G	0.9	0.1	4	T	1.0	1.0	A	1.0	0.0	4	T	7.0	1.0	G	0.9	0.1	4	T	1.0
1	II	II	2.2	200	A	1.0	O	0.6	0.4	3	T	1.0	1.0	A	0.6	0.0	3	T	5.0	1.0	O	0.6	0.4	3	T	1.0

Gradation Processing
- Rotation Amount (GA)
- Gradation Type (GT)
- Rotation Center (GC)
- Gradation Shifting Amount (GS)

Frequency Processing
- Frequency Rank (RN)
- Frequency Type (RT)
- Frequency Enhancement (RE)

[Chest 3]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Plain	2	0210	CHEST, SPECIAL-1 (PA)	For pneumoconiosis diagnosis	Load the system with the display parameters usually considered appropriate for coniosis staging.
	2	0220	CHEST, SPECIAL-2 (PA)	For mass radiography	Load the system with the display parameter considered fit for screening.
	2	0217	CHEST, PED.-1 (AP)	Low-dose plain thoracic exposure in infants	
	2	020E	CHEST, GENERAL-2 (PA)	Observation of a thin shadow in the lung field (infiltrative alveolar shadow)	
	2	020F	CHEST, PORTABLE (AP)	Observation of chest for prognosis	
	2	0211	SHOULDER, "Y" VIEW (PA)	Observation of thoracic spine in oblique radiogram	
	2	1205	CHEST, MYELO., FRN :C (AP)	Exposure with a contrast medium of the spinal canal and intervertebral discs of the thoracic spine	
Contrast	2	1206	CHEST, LYMPHA, FRN :C (AP)	Thoracic lymphatic duct and lymph node exposure with a contrast medium	
	2	1204	CHEST, MYELO., LAT :C (AP)	Exposure with a contrast medium of the spinal canal and intervertebral discs of the thoracic spine (this menu is used when the enface radiogram is different in density from the oblique radiogram)	
	2	1207	CHEST, LYMPHA, LAT :C (AP)	Thoracic lymphatic duct and lymph node exposure with a contrast medium (this menu is used when the enface radiogram is different in density from the oblique radiogram)	
	2	1208	SHLD, JNT, ARTHRO :C (AP)	Shoulder joint exposure with a contrast medium	Use a grid.
Magnification	2	4208	CHEST, MAG :M (AP)	3× or more magnification of the lung field, thoracic lymphoduct, and other sites	

EDR mode						Display Parameter																		
Auto		Semi		Fix	Preset	Two-image Display																		
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
4S	II	IV	2.2	200	A	1.0	E	1.6	-0.2	4	R	0.3	-0.9	A	0.5	-1.15	4	R	0.5	1.1	E	1.6	-0.2	4	R	0.3
4S	II	IV	2.2	200	A	1.0	E	1.6	-0.2	0	R	0.5	0.9	A	1.5	-0.2	0	R	3.0	0.8	E	1.6	-0.2	0	R	0.5
4S	II	II	2.2	200	A	1.0	D	1.6	-0.3	7	X	0.4	1.0	D	1.6	-0.3	7	R	0.0	1.0	D	1.6	-0.3	7	X	0.4
4S	II	IV	2.2	200	A	1.0	P	1.6	0.0	4	R	0.2	0.9	A	1.5	-0.2	4	R	5.0	1.0	P	1.6	0.0	9	R	0.5
-	IV	IV	2.2	200	A	1.2	E	1.6	-0.2	4	R	0.5	1.0	E	1.6	-0.3	4	R	5.0	1.2	E	1.6	-0.2	4	R	0.5
4S	II	II	2.2	200	A	1.2	G	0.9	0.2	5	T	1.0	1.0	A	0.7	0.1	5	T	7.0	1.2	G	0.9	0.2	5	T	1.0
4S	II	II	2.2	200	A	1.1	G	0.9	0.6	5	T	1.0	1.0	A	0.7	0.2	5	T	5.0	1.1	G	0.9	0.6	5	T	1.0
4S	II	II	2.2	200	A	1.1	G	0.9	0.6	5	T	1.0	1.0	A	0.7	0.2	5	T	5.0	1.1	G	0.9	0.6	5	T	1.0
4S	II	II	2.2	200	A	1.0	G	0.9	0.1	5	T	1.0	1.0	A	1.0	0.0	5	T	5.0	1.0	G	0.9	0.1	5	T	1.0
4S	II	II	2.2	200	A	1.0	G	0.9	0.1	5	T	1.0	1.0	A	1.0	0.0	5	T	5.0	1.0	G	0.9	0.1	5	T	1.0
4S	II	II	2.2	200	A	1.2	G	0.6	0.25	5	T	1.0	1.0	A	0.9	0.0	5	T	5.0	1.2	G	0.6	0.25	5	T	1.0
4	II	II	2.0	200	S	1.2	E	1.6	-0.2	3	R	1.0	0.9	A	1.5	-0.2	3	R	5.0	1.0	E	1.6	-0.2	3	R	1.0

Gradation Processing: Rotation Amount (GA), Gradation Type (GT), Rotation Center (GC), Gradation Shifting Amount (GS)
Frequency Processing: Frequency Rank (RN), Frequency Type (RT), Frequency Enhancement (RE)

[Abdomen 1]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Plain	1	0400	ABDOMEN, GENERAL (AP)	Plain abdominal exposure; observation of the whole abdomen; thoracicoabdominal exposure	
	1	0402	ABDOMEN, PEDS (AP)	Observation of the abdomen and pelvic part of infants (3 years old or less); thoracicoabdomimal exposure in infants	
	1	0403	ABDOM., SOFT TISS. (AP)	Observation of abdominal soft parts	
	1	0410	ABDOMEN, UPRIGHT (AP)	Plain abdominal exposure; observation of the whole abdomen; thoracicoabdominal exposure with upright	
	1	0420	ABDOMEN, DECUB. (AP)	Plain abdominal exposure; observation of the whole abdomen; thoracicoabdominal exposure for decubitus	
	1	0422	ABDOMEN, PED PRT (AP)	Observation of the abdomen and pelvic part of infants (3 years old or less); thoracicoabdomimal exposure in infants	
	1	0430	ABDOMEN, PORTABLE (AP)	Plain abdominal exposure; observation of the whole abdomen; thoracicoabdominal exposure for portable	
	1	0432	ABDOMEN, NEONATE (AP)	Plain abdominal exposure; observation of the whole abdomen; thoracicoabdominal exposure for neonate	
	1	0440	U.G.I. (AP)	Upper gastric intestine	
	1	0442	PEDIATRIC G.I. (AP)	Upper gastric intestine for pediatrics	
	1	0450	B.E. (AP)		
	1	0460	S.B.F.T (AP)		
Contrast	1	1400	ABDOM., BL. VESSEL :C (AP)	Abdominal blood vessel exposure with a contrast medium	
	1	1401	UGI AIR CONTRAST :C (AP)	Gastric exposure with a contrast medium by filling, compression, double-contrast, and relief methods	
	1	1402	BE AIR CONTRAST :C (AP)	Large and small intestine exposure by the barium enema and barium meal methods	
	1	1403	I.V.P. :C (AP)	Venous, intravenous drip type, and retrograde pyelography	
	1	1404	G.B./PANCREATIC DUCT :C (AP)	Venous cholangiography, intravenous drip type cholagiography, oral cholecystography, PTC, and ERCP	

EDR mode						Display Parameter																			
Auto		Semi		Fix	Preset	Two-image Display																			
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
4S	II	II	2.0	200	A	1.1	D	0.6	0.2	3	Q	0.5	0.9	A	0.7	0.0	3	Q	5.0	0.9	D	1.6	0.6	3	Q	0.5
4S	II	II	2.0	200	A	1.2	D	1.6	0.1	3	R	0.3	1.2	A	1.6	0.25	3	R	3.0	1.2	D	1.6	0.1	3	R	0.3
-	IV	II	2.6	200	A	1.1	F	2.0	0.0	3	Q	1.0	0.7	A	1.6	-0.2	3	Q	7.0	1.1	F	2.0	0.0	3	Q	1.0
4S	II	II	2.0	200	A	1.1	D	0.6	0.45	3	Q	0.5	0.9	A	0.7	0.0	3	Q	5.0	1.1	D	1.6	0.45	3	Q	0.5
4S	II	II	2.0	200	A	1.1	D	0.6	0.2	3	Q	0.5	0.9	A	0.7	0.0	3	Q	5.0	0.9	D	1.6	0.2	3	Q	0.5
4S	II	II	2.0	200	A	1.2	D	1.6	0.1	3	R	0.0	1.2	A	1.6	0.25	3	R	3.0	1.2	D	1.6	0.1	3	R	0.0
4S	II	II	2.0	200	A	1.1	D	0.6	0.2	3	Q	0.5	0.9	A	0.7	0.0	3	Q	5.0	0.9	D	1.6	0.2	3	Q	0.5
4S	II	II	2.0	200	A	1.2	D	1.6	0.15	3	Q	0.0	1.2	A	1.6	0.25	3	Q	3.0	1.2	D	1.6	0.15	3	Q	0.0
4S	II	II	2.0	200	A	1.3	N	0.6	0.3	4	Q	0.5	0.9	A	0.7	0.0	4	Q	5.0	1.3	N	1.6	0.3	4	Q	0.5
4S	II	II	2.0	200	A	0.9	D	1.6	0.2	3	Q	0.5	1.2	A	1.6	0.25	3	Q	3.0	0.9	D	1.6	0.2	3	Q	0.5
4S	II	II	2.0	200	A	1.3	N	0.6	0.3	4	Q	0.5	0.9	A	0.7	0.0	4	Q	5.0	1.3	N	1.6	0.3	4	Q	0.5
4S	II	II	2.0	200	A	1.3	N	0.6	0.3	4	Q	0.5	0.9	A	0.7	0.0	4	Q	5.0	1.3	N	1.6	0.3	4	Q	0.5
4S	II	II	2.0	200	A	1.1	D	0.6	0.4	5	T	1.0	0.9	A	0.5	0.0	5	T	5.0	1.1	D	0.6	0.4	5	T	1.0
1S	III	II	2.0	200	A	1.0	N	0.3	0.3	8	T	1.0	1.0	A	0.5	0.2	8	T	7.0	1.3	N	0.3	0.3	8	T	1.0
1S	III	II	2.0	200	A	1.0	N	0.3	0.3	8	T	1.0	1.0	A	0.5	0.2	8	T	7.0	1.3	N	0.3	0.3	8	T	1.0
4S	II	II	2.0	200	A	1.0	D	0.6	0.3	4	T	0.5	1.0	A	0.5	0.2	4	T	7.0	1.0	D	0.6	0.3	4	T	0.5
4S	II	II	2.0	200	A	1.2	D	0.6	0.3	4	T	0.5	1.0	A	0.5	0.2	4	T	7.0	1.2	D	0.6	0.3	4	T	0.5

Gradation Processing: Rotation Amount (GA), Gradation Type (GT), Rotation Center (GC), Gradation Shifting Amount (GS)
Frequency Processing: Frequency Rank (RN), Frequency Type (RT), Frequency Enhancement (RE)

[Abdomen 2]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Tomography	1	3400	GALLBLADDER :T (AP)	Visualization tomography of the gallbladder	
	1	3401	KIDNEY TOMO :T (AP)	Visualization tomography of the renal pelvis	
Plain	2	0412	ABDOM., PED. -1 (AP)	Low-dose exposure of the abdomen, pelvic part, and thoracicoabdominal part of infants	
Contrast	2	1405	ABDOMEN, MYELO :C (AP)	Spinal canal and intervertebral disc exposure with a contrast medium	
	2	1406	ABDOMEN, LYMPHA :C (AP)	Abdominal lymphatic duct and lymph node exposure with a contrast medium	
Magnification	2	5406	ABDOMEN, MAG :M (AP)	3× or more magnification of the abdominal lymphatic duct, bones, and other organs	

EDR mode						Display Parameter																		
Auto		Semi		Fix	Preset	Two-image Display																		
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
1	II	II	2.0	200	A	1.2	J	0.6	0.3	4	Q	1.0	1.0	A	0.6	0.0	4	Q	7.0	1.0	J	0.6	0.3	4	Q	1.5
1	II	II	2.0	200	A	1.0	F	0.6	0.3	3	Q	0.3	1.0	A	0.5	0.2	3	Q	5.0	1.0	F	0.6	0.3	3	Q	0.3
4S	II	II	2.0	200	A	1.2	D	1.6	0.25	7	X	0.4	1.2	A	1.6	0.25	7	R	0.0	1.2	D	1.6	0.25	7	X	0.4
4S	II	II	2.0	200	A	1.1	O	0.9	0.4	5	T	1.0	1.0	A	1.0	0.1	5	T	5.0	1.1	O	0.9	0.4	5	T	1.0
4S	II	II	2.0	200	A	1.1	D	0.6	0.4	5	T	1.0	0.9	A	0.5	0.0	5	T	5.0	1.1	D	0.6	0.4	5	T	1.0
4	II	I	2.0	200	S	1.1	D	0.6	0.4	4	R	1.0	0.9	A	0.5	0.0	4	T	5.0	1.1	D	0.6	0.4	4	R	1.0

Gradation Processing
- Rotation Amount (GA)
- Gradation Type (GT)
- Rotation Center (GC)
- Gradation Shifting Amount (GS)

Frequency Processing
- Frequency Rank (RN)
- Frequency Type (RT)
- Frequency Enhancement (RE)

[Pelvis 1]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Plain	1	0500	PELVIS, GENERAL (AP)	Observation of the pelvis, ilium, and peripheral soft parts	
	1	0501	L-SPINE, AP/OBL (AP)	Observation of the lumbar and thoracolumbar spine	
	1	0502	SAC/COCCYX, SI JNT (AP)	Observation of the sacrum and coccyx	
	1	0503	UTERUS, PREGNANCY (AP)	Exposure of fetus and placenta	
	1	0504	PELVIMETRY (AP)	Measurement of the pelvic dimensions or proportions	
	1	0506	PELVIS, PEDIATRICS (AP)	Observation of the pelvis and peripheral soft parts of infants (3 years old or less)	
	1	0507	LUMB., SOFT TISSUE (AP)	Observation of soft parts of the abdomen, kidney, and other organs	
	1	0508	HIP JOINT (AP)	Observation of the hip joint (Use the FIX MODE when protector is used.)	
	1	050A	HIP J., PEDIATRICS (AP)	Observation of the hip joint of infants- 3 or less years of age. (Use the FIX MODE when protector is used.)	
	1	0510	PELVIS, PORTABLE (AP)	Observation of the pelvis, ilium, and peripheral soft parts for portable	
	1	0511	LUMBAR, LATERAL (AP)	Observation of the lumbar and thoracolumbar spine for lateral	
	1	0512	L5-S1 SPOT (AP)	Spot exposure from L5 to S1	
	1	0518	FEMUR, PROXIMAL (AP)	Observation of femure	
	1	0521	SWIMMERS (AP)	Observation of shoulder joint at SWIMMERS technique	
	1	0528	HIP X-TABLE FIXED (AP)	Observation of the hip joint (Use the FIX MODE when protector is used.)	
	1	0531	L-SPINE LAT FIXED (AP)	Observation of the lumbar and thoracolumbar spine	

EDR mode						Display Parameter																		
Auto		Semi		Fix	Preset	Two-image Display																		
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
4S	II	II	2.0	200	A	0.9	O	0.6	0.4	4	T	0.5	1.0	A	0.6	-0.2	4	T	5.0	0.9	O	0.6	0.4	4	T	0.5
4S	II	II	2.0	200	A	1.1	O	0.9	0.4	5	T	0.5	1.0	A	0.9	0.1	5	T	5.0	1.1	O	0.9	0.4	5	T	0.5
4S	II	II	2.0	200	A	0.9	O	0.9	0.2	5	T	0.5	1.0	A	1.2	0.1	5	T	5.0	0.9	O	0.9	0.2	5	T	0.5
4S	II	II	2.0	200	A	1.1	D	0.6	0.2	3	Q	1.0	0.9	A	0.7	0.0	3	Q	5.0	1.1	D	0.6	0.2	3	Q	1.0
4S	II	II	2.0	200	A	1.1	D	0.6	0.2	3	Q	1.0	0.9	A	0.7	0.0	3	Q	5.0	1.1	D	0.6	0.2	3	Q	1.0
4S	II	II	2.0	200	A	1.3	D	1.6	0.2	5	R	0.3	0.9	A	1.2	-0.2	5	R	3.0	1.3	D	1.6	0.2	5	R	0.3
-	IV	II	2.6	200	A	1.1	F	2.0	0.0	3	Q	1.0	0.7	A	1.6	-0.2	3	Q	7.0	1.1	F	2.0	0.0	3	Q	1.0
4S	II	II	2.0	200	A	1.3	D	1.6	0.4	5	R	0.5	0.9	A	1.6	0.0	5	R	5.0	1.3	D	1.6	0.4	5	R	0.5
4S	II	II	2.0	200	A	1.3	D	1.6	0.2	5	R	0.3	0.9	A	1.2	-0.2	5	R	3.0	1.3	D	1.6	0.2	5	R	0.3
4S	II	II	2.0	200	A	0.9	O	0.6	0.2	4	T	0.5	1.0	A	0.6	-0.2	4	T	5.0	0.9	O	0.6	0.2	4	T	0.5
4S	II	II	2.0	200	A	1.1	O	0.9	0.45	5	T	0.3	1.0	A	0.9	0.1	5	T	5.0	1.1	O	0.9	0.45	5	T	0.3
4S	II	II	2.0	200	A	0.9	O	0.9	0.3	5	T	0.5	1.0	A	1.2	0.1	5	T	5.0	0.9	O	0.9	0.3	5	T	0.5
4S	II	II	2.0	200	A	1.3	D	1.6	0.4	5	R	0.5	0.9	A	1.6	0.0	5	R	5.0	1.3	D	1.6	0.4	5	R	0.5
4S	II	II	2.0	200	A	1.1	J	0.9	0.7	5	T	0.5	1.0	A	0.9	0.1	5	T	5.0	1.1	J	0.9	0.7	5	T	0.5
4S	II	II	2.0	200	A	1.0	O	0.6	0.0	4	T	0.5	1.0	A	0.6	-0.2	4	T	5.0	1.0	O	0.6	0.0	4	T	0.5
4S	II	II	2.0	200	A	1.0	O	0.9	0.0	5	T	0.5	1.0	A	0.9	0.1	5	T	5.0	1.0	L	0.9	0.0	5	T	0.5

Gradation Processing: Rotation Amount (GA), Gradation Type (GT), Rotation Center (GC), Gradation Shifting Amount (GS)
Frequency Processing: Frequency Rank (RN), Frequency Type (RT), Frequency Enhancement (RE)

[Pelvis 2]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Contrast	1	1500	PELVIS, BL. VESSEL :C (AP)	Pelvic blood vessel exposure with a contrast medium	
	1	1501	BLADDER CONTRAST :C (AP)	Urinary bladder and urethra exposure with a contrast medium	
Tomography	1	2500	LUMBAR SPINE :T (AP)	Tomography of the lumbar and thoracolumbar spine	
	1	2501	SACRUM :T (AP)	Tomography of the sacrum	
	1	2502	HIP JOINT :T (AP)	Tomography of the hip joint and femoral region	
Plain	2	0516	PELVIS, PED.-1 (AP)	Low-dose exposure of the pelvis and peripheral soft parts of infants	
	2	051A	HIP J., PED.-1 (AP)	Low-dose infantile hip joint exposure (Use the FIX MODE when protector is used.)	
	2	050C	HIP, X-TABLE LAT. (AP)	Observation of the hip joint by axial projection	
Contrast	2	1502	ABD. HYSTERO. :C (AP)	Uterus and salpinx exposure with a constrast medium	
	2	1503	SEMI. VES., VAS. :C (AP)	Seminal vesicle and seminal duct exposure with a contrast medium	
	2	1505	PELVIS, MYELO. :C (AP)	Pelvic spinal canal, extradural space, and intervertebral disc exposure with a contrast medium	
	2	1506	PELVIS, LYMPHA :C (AP)	Pelvic lymphatic duct and lymph node exposure with a contrast medium	
	2	1507	HIP JNT, ARTHRO. :C (AP)	Hip joint exposure with a contrast medium	
Magnification	2	5506	PELVIS, MAG :M (AP)	3× or more magnification of the pelvic lymphatic duct, bone, and other organs	

EDR mode						Display Parameter																		
Auto		Semi		Fix	Preset	Two-image Display																		
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
4S	II	II	2.0	200	A	0.9	O	0.6	0.5	4	T	1.0	1.0	A	0.5	0.0	4	T	5.0	0.9	O	0.6	0.5	4	T	1.0
4S	II	II	2.0	200	A	1.2	D	0.6	0.3	4	T	0.5	1.0	A	0.6	0.0	4	T	7.0	1.2	D	0.6	0.3	4	T	0.5
1	II	II	2.0	200	A	1.1	O	0.9	0.4	4	Q	1.0	1.0	A	0.9	0.1	4	Q	7.0	1.1	O	0.9	0.4	4	Q	1.0
1	II	II	2.0	200	A	1.1	O	0.9	0.8	4	Q	1.0	1.0	A	0.9	0.5	4	Q	7.0	1.1	O	0.9	0.8	4	Q	1.0
1	II	II	2.0	200	A	1.0	O	0.6	0.5	3	T	1.0	1.0	A	0.6	0.1	3	T	5.0	1.0	O	0.6	0.5	3	T	1.0
4S	II	II	2.0	200	A	1.3	D	1.6	0.2	7	X	0.4	1.3	D	1.6	0.2	7	R	0.0	1.3	D	1.6	0.2	7	X	0.4
4S	II	II	2.0	200	A	1.3	D	1.6	0.2	7	X	0.4	1.3	D	1.6	0.2	7	R	0.0	1.3	D	1.6	0.2	7	X	0.4
-	V	II	2.0	200	A	1.3	D	1.6	0.4	5	T	0.5	0.8	O	1.6	0.4	5	T	1.0	1.3	D	1.6	0.4	5	T	0.5
4S	II	II	2.0	200	A	1.2	D	0.6	0.3	4	T	1.0	1.0	A	0.6	0.0	4	T	7.0	1.2	D	0.6	0.3	4	T	1.0
4S	II	II	2.0	200	A	1.2	D	0.6	0.3	4	T	1.0	1.0	A	0.6	0.0	4	T	7.0	1.2	D	0.6	0.3	4	T	1.0
4S	II	II	2.0	200	A	1.1	O	0.9	0.4	5	T	1.0	1.0	A	1.0	0.1	5	T	5.0	1.1	O	0.9	0.4	5	T	1.0
4S	II	II	2.0	200	A	0.9	O	0.6	0.5	4	T	1.0	1.0	A	0.5	0.0	4	T	5.0	0.9	O	0.6	0.5	4	T	1.0
4S	II	II	2.0	200	A	1.3	D	1.6	0.5	4	T	1.0	0.9	A	1.6	0.0	4	T	5.0	1.3	D	1.6	0.5	4	T	1.0
4	II	I	2.0	200	S	0.9	O	0.6	0.5	5	R	1.0	1.0	A	0.5	0.0	5	T	5.0	0.9	O	0.6	0.5	5	R	1.0

Gradation Processing: Rotation Amount (GA), Gradation Type (GT), Rotation Center (GC), Gradation Shifting Amount (GS)
Frequency Processing: Frequency Rank (RN), Frequency Type (RT), Frequency Enhancement (RE)

[Upper Extremity 1]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Plain	1	0600	HUMERUS (AP)	Observation of the humerus, its soft part, and the elbow joint	
	1	0601	FOREARM (AP)	Observation of the antebrachial bone, its soft part, and the wrist joint	
	1	0603	HUMERUS SOFT TISS. (AP)	Observation of the brachial soft part as the main target	
	1	0605	FORE ARM, SOFT TISS. (AP)	Observation of the antebrachial soft part as the main target	
	1	0606	HAND (AP)	Observation of the metacarpal bone and peripheral soft parts	
	1	0607	FINGER (AP)	Observation of the phalanges and peripheral soft parts	
	1	0608	ARM, PEDIATRICS (AP)	Observation of the arm of infants (3 years old or less)	
	1	0609	HAND, PEDIATRICS (AP)	Observation of the hand of infants (3 years old or less)	
	1	060B	WRIST CARPAL TUNN. (AP)	Elbow joint and carpal tunnel exposure by axial projection	
	1	0610	ELBOW (AP)	Observation of the elbow	
	1	0611	WRIST (AP)	Observation of wrist and wrist joint	
	1	0616	HAND, LATERAL (AP)	Observation of hand lateral	
	1	0620	UPPER EXT. CAST (AP)	Observation of upper ext. in cast	
Contrast	1	1600	UP. ARM, BL. VESSEL :C (AP)	Brachial blood vessel exposure with a contrast medium	
	1	1601	FO. ARM, BL. VESSEL :C (AP)	Antebrachial blood vessel exposure with a contrast medium	
	1	1602	HAND, BL. VESSEL :C (AP)	Hand blood vessel exposure with a contast medium	
Tomography	1	2601	ELBOW JOINT :T (AP)	Elbow joint tomography	

EDR mode						Display Parameter																		
Auto		Semi		Fix	Preset	Two-image Display																		
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
4S	I	III	2.0	200	A	1.0	O	0.6	0.4	5	T	0.5	1.0	A	0.6	0.0	5	T	5.0	0.8	O	0.6	0.4	5	T	0.5
4S	I	III	2.0	200	A	0.8	O	0.6	0.4	7	T	1.0	1.0	A	0.8	0.0	7	T	5.0	0.8	O	0.6	0.4	7	T	1.0
4S	I	III	2.0	200	A	1.0	O	0.6	0.4	3	T	0.5	1.0	A	0.6	0.0	3	T	5.0	1.0	O	0.6	0.4	3	T	0.5
4S	I	III	2.0	200	A	1.0	O	0.6	0.2	3	T	0.5	1.0	A	0.6	0.0	3	T	5.0	1.0	O	0.6	0.2	3	T	0.5
4S	I	III	2.0	200	A	0.9	O	0.6	0.35	7	T	1.0	0.9	A	0.6	0.35	7	T	5.0	0.9	O	0.6	0.35	7	T	1.0
4S	I	III	2.0	200	A	0.9	O	0.6	0.3	7	T	1.0	0.9	A	0.7	0.1	7	T	5.0	0.9	O	0.6	0.3	7	T	1.0
4S	I	III	2.0	200	A	1.0	O	0.6	0.5	5	T	0.3	1.0	A	0.6	0.1	5	T	3.0	1.0	O	0.6	0.5	5	T	0.3
4S	I	III	2.0	200	A	0.8	O	0.6	0.4	5	T	0.3	0.9	A	0.7	0.1	5	T	3.0	0.8	O	0.6	0.4	5	T	0.3
-	IV	III	2.0	200	A	1.1	F	2.0	0.0	7	T	1.0	0.7	A	1.6	-0.2	7	T	7.0	1.1	F	2.0	0.0	7	T	1.0
4S	I	III	2.0	200	A	0.9	O	0.6	0.4	7	T	1.0	1.0	A	0.6	0.0	7	T	5.0	0.9	O	0.6	0.4	7	T	1.0
4S	I	III	2.0	200	A	0.8	O	0.6	0.3	7	T	1.0	1.0	A	0.8	0.0	7	T	5.0	0.8	O	0.6	0.3	7	T	1.0
4S	I	III	2.0	200	A	1.0	O	0.6	0.7	7	T	1.0	0.9	A	0.6	0.7	7	T	5.0	1.0	O	0.6	0.7	7	T	1.0
4S	I	III	2.0	200	A	0.8	O	0.6	0.5	5	T	0.5	1.0	A	0.6	0.0	5	T	5.0	0.8	O	0.6	0.5	5	T	0.5
4S	I	III	2.0	200	A	1.0	O	0.6	0.5	4	T	1.0	1.0	A	0.5	0.0	4	T	5.0	0.8	O	0.6	0.5	4	T	1.5
4S	I	III	2.0	200	A	1.0	O	0.6	0.3	4	T	1.0	1.0	A	0.7	0.0	4	T	5.0	0.8	O	0.6	0.3	4	T	1.5
4S	I	III	2.0	200	A	0.9	O	0.6	0.6	4	T	1.0	0.9	A	0.7	0.2	4	T	5.0	0.8	O	0.6	0.6	4	T	1.5
1	I	III	2.0	200	A	1.0	O	0.6	0.4	5	T	1.0	1.0	A	0.6	0.0	5	T	5.0	0.9	O	0.6	0.4	5	T	1.5

Gradation Processing: Rotation Amount (GA), Gradation Type (GT), Rotation Center (GC), Gradation Shifting Amount (GS)
Frequency Processing: Frequency Rank (RN), Frequency Type (RT), Frequency Enhancement (RE)

[Upper Extremity 2]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Contrast	2	1610	UPPER ARM, LYMPHA :C (AP)	Brachial lymphatic duct and lymph node exposure with a contrast medium	
	2	1611	FORE ARM, LYMPHA :C (AP)	Antebrachial lymphatic duct and lymph node exposure with a contrast medium	
	2	1612	HAND, LYMPHA :C (AP)	Exposure with a contrast medium of the lymphatic duct and lymph node in the hand	
	2	1620	ELBOW JNT, ARTHRO :C (AP)	Elbow joint exposure with a contrast medium	
	2	1622	WRIST JNT, ARTHRO :C (AP)	Exposure of the joint of the hand with a contrast medium	
Magnification	2	4607	UP. EXTREMITY, MAG :M (AP)	3× or more magnification of the phalanges and other bones	

EDR mode						Display Parameter																		
Auto		Semi		Fix	Preset	Two-image Display																		
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
4S	I	III	2.0	200	A	1.0	O	0.6	0.5	4	T	1.0	1.0	A	0.5	0.0	4	T	5.0	0.8	O	0.6	0.5	4	T	1.5
4S	I	III	2.0	200	A	1.0	O	0.6	0.3	4	T	1.0	1.0	A	0.7	0.0	4	T	5.0	0.8	O	0.6	0.3	4	T	1.5
4S	I	III	2.0	200	A	0.9	O	0.6	0.6	4	T	1.0	0.9	A	0.7	0.2	4	T	5.0	0.8	O	0.6	0.6	4	T	1.5
4S	I	III	2.0	200	A	1.0	O	0.6	0.4	3	T	1.0	1.0	A	0.6	0.3	3	T	5.0	0.8	O	0.6	0.4	3	T	1.5
4S	I	III	2.0	200	A	1.0	O	0.6	0.2	3	T	1.0	1.0	A	0.8	0.0	3	T	5.0	0.8	O	0.6	0.2	3	T	1.5
4	I	II	2.0	200	S	1.1	I	0.6	0.3	5	R	1.0	0.9	A	0.7	0.1	5	R	5.0	1.1	I	0.6	0.3	5	R	1.0

Gradation Processing: Rotation Amount (GA), Gradation Type (GT), Rotation Center (GC), Gradation Shifting Amount (GS)
Frequency Processing: Frequency Rank (RN), Frequency Type (RT), Frequency Enhancement (RE)

[Lower Extremity 1]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Plain	1	0700	FEMUR, DISTAL (AP)	Observation of the femoral bone, soft tissues and the knee (It should be noted however that knee joint observation by axial projection is excluded.)	
	1	0701	TIB/FIB (AP)	Observation of the crural bone and soft part	
	1	0703	FEMUR, SOFT TISS. (AP)	Observation of the femoral soft part as the main target	
	1	0705	TIB/FIB, SOFT TISS. (AP)	Observation of the crural soft part as the main target	
	1	0706	FOOT (AP)	Observation of the foot, articulation, tarsal bone, and calcaneus by axial projection	
	1	0707	TOES (AP)	Observation of the toe and phalanges	
	1	0708	LEG. PEDIATRICS (AP)	Observation of the lower extremities of infants (3 years old or less)	
	1	0709	FOOT, PEDIATRICS (AP)	Observation of the foot of infants (3 years old or less)	
	1	070B	KNEE, SUNRISE (AP)	Patellar exposure by axial projection	
	1	0710	KNEE, AP/OBL (AP)	Observation of the knee joint	
	1	0711	ANKLE (AP)	Observation of the ankle joint	
	1	0716	FOOT, LATERAL (AP)	Observation of the foot, articulation, tarsal bone, and calcaneus by axial projection for lateral position	
	1	071B	PATL. AXL., ARTHRO :C (AP)	Observation of the patella axial at arthrography	
	1	0720	KNEE, LATERAL (AP)	Observation of the knee joint for lateral position	
	1	0730	LOWER EXT. CAST (AP)	Observation of the lower extrem. in cast	
	1	0731	CALCANEOUS, AXIAL (AP)		

EDR mode						Display Parameter																		
Auto		Semi		Fix	Preset	Two-image Display																		
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
4S	I	III	2.0	200	A	0.8	O	0.6	0.5	7	T	1.0	1.0	A	0.6	0.1	7	T	5.0	0.8	O	0.6	0.5	7	T	1.0
4S	I	III	2.0	200	A	0.8	O	0.6	0.4	7	T	1.0	1.0	A	0.7	0.1	7	T	5.0	0.8	O	0.6	0.4	7	T	1.0
4S	I	III	2.0	200	A	1.0	O	0.6	0.5	3	T	0.5	1.0	A	0.6	0.1	3	T	5.0	1.0	O	0.6	0.5	3	T	0.5
4S	I	III	2.0	200	A	0.9	O	0.6	0.4	3	T	0.5	1.0	A	0.7	0.1	3	T	5.0	0.9	O	0.6	0.4	3	T	0.5
4S	VI	III	2.0	200	A	0.9	O	0.6	0.1	7	T	1.0	0.8	A	1.0	0.1	7	T	5.0	0.9	O	0.6	0.1	7	T	1.0
4S	I	III	2.0	200	A	0.9	O	0.6	-0.2	7	T	1.0	0.9	A	0.9	-0.1	7	T	5.0	0.9	O	0.6	-0.2	5	T	1.0
4S	I	III	2.0	200	A	1.0	O	0.6	0.5	5	T	0.3	1.0	A	0.6	0.1	5	T	3.0	1.0	O	0.6	0.5	5	T	0.3
4S	I	III	2.0	200	A	0.8	O	0.6	0.3	5	T	0.3	0.9	A	0.7	0.0	5	T	3.0	0.8	O	0.6	0.3	5	T	0.3
-	IV	III	2.6	200	A	1.1	F	2.0	0.0	5	T	1.0	0.7	A	2.0	-0.5	5	T	7.0	1.1	F	2.0	0.0	5	T	1.0
4S	I	III	2.0	200	A	0.9	O	0.6	0.4	7	T	1.0	1.0	A	0.6	0.1	7	T	5.0	0.9	O	0.6	0.4	7	T	1.0
4S	I	III	2.0	200	A	0.8	O	0.6	0.4	7	T	1.0	1.0	A	0.7	0.1	7	T	5.0	0.8	O	0.6	0.4	7	T	1.0
4S	I	III	2.0	200	A	0.8	O	0.6	0.3	7	T	1.0	0.8	A	1.0	0.1	7	T	5.0	0.8	O	0.6	0.3	7	T	1.0
4S	I	III	2.0	200	A	1.1	F	2.0	0.0	3	T	1.0	0.7	A	2.0	-0.5	3	T	7.0	1.1	F	2.0	0.0	3	T	1.0
4S	I	III	2.0	200	A	0.8	O	0.6	0.5	7	T	1.0	1.0	A	0.6	0.1	7	T	5.0	0.8	O	0.6	0.5	7	T	1.0
4S	I	III	2.0	200	A	0.8	O	0.6	0.5	5	T	0.5	1.0	A	0.6	0.1	5	T	5.0	0.8	O	0.6	0.5	5	T	0.5
4S	I	III	2.0	200	A	0.8	O	0.6	0.4	7	T	1.0	1.0	A	0.7	0.1	7	T	5.0	0.8	O	0.6	0.4	7	T	1.0

Gradation Processing: Rotation Amount (GA), Gradation Type (GT), Rotation Center (GC), Gradation Shifting Amount (GS)
Frequency Processing: Frequency Rank (RN), Frequency Type (RT), Frequency Enhancement (RE)

[Lower Extremity 2]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Contast	1	1700	THIGH, BL. VESSEL :C (AP)	Femoral blood vessel exposure with a contrast medium	
	1	1701	LO. LEG, BL. VESSEL :C (AP)	Crural blood vessel exposure with a contrast medium	
	1	1702	FOOT, BL. VESSEL :C (AP)	Foot blood vessel exposure with a contrast medium	
Tomography	1	2701	KNEE JOINT :T (AP)	Knee joint tomography	
	1	2702	ANKLE JOINT :T (AP)	Ankle joint tomography	
Contrast	2	1710	THIGH, LYMPHA :C (AP)	Femoral lymphatic duct and lymph node exposure with a contrast medium	
	2	1711	LOWER LEG, LYMPHA :C (AP)	Crural lymphatic duct and lymph node exposure with a contrast medium	
	2	1712	FOOT, LYMPHA :C (AP)	Exposure of the lymphatic duct and lymph node of the foot with a contrast medium	
	2	1720	KNEE JNT, ARTHRO :C (AP)	Knee joint exposure with a contrast medium	
	2	1722	ANKLE JNT, ARTHRO :C (AP)	Ankle joint exposure with a contrast medium	
	2	071B	PATL. AXL., ARTHRO :C (AP)	Exposure of patellar with a contrast medium by axial projection	
Magnifi-cation	2	4707	LO. EXTREMITY, MAG :M (AP)	3× or more magnification of the toe and other sites	

EDR mode						Display Parameter																		
Auto		Semi		Fix	Preset	Two-image Display																		
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
4S	I	III	2.0	200	A	1.0	O	0.6	0.6	4	T	1.0	1.0	A	0.5	0.1	4	T	5.0	0.8	O	0.6	0.6	4	T	1.5
4S	I	III	2.0	200	A	0.9	O	0.6	0.5	4	T	1.0	1.0	A	0.6	0.1	4	T	5.0	0.8	O	0.6	0.5	4	T	1.5
4S	I	III	2.0	200	A	0.8	O	0.6	0.4	4	T	1.0	0.8	A	1.0	0.1	4	T	5.0	0.7	O	0.6	0.4	4	T	1.5
1	I	III	2.0	200	A	1.0	O	0.6	0.4	5	T	1.0	1.0	A	0.6	0.1	5	T	5.0	0.9	O	0.6	0.4	5	T	1.5
1	I	III	2.0	200	A	0.8	O	0.6	0.3	5	T	1.0	0.8	A	1.0	0.1	5	T	5.0	0.7	O	0.6	0.3	5	T	1.5
4S	II	III	2.0	200	A	1.0	O	0.6	0.6	4	T	1.0	1.0	A	0.5	0.1	4	T	5.0	0.8	O	0.6	0.6	4	T	1.5
4S	I	III	2.0	200	A	1.0	O	0.6	0.5	4	T	1.0	1.0	A	0.6	0.1	4	T	5.0	0.8	O	0.6	0.5	4	T	1.5
4S	I	III	2.0	200	A	0.8	O	0.6	0.4	4	T	1.0	0.8	A	1.0	0.1	4	T	5.0	0.7	O	0.6	0.4	4	T	1.5
4S	I	III	2.0	200	A	1.0	O	0.6	0.5	3	T	1.0	1.0	A	0.6	0.1	3	T	5.0	0.8	O	0.6	0.5	3	T	1.5
4S	I	III	2.0	200	A	0.9	O	0.6	0.4	3	T	1.0	1.0	A	0.6	0.1	3	T	5.0	0.8	O	0.6	0.4	3	T	1.5
-	IV	III	2.6	200	A	1.1	F	2.0	0.0	3	T	1.0	0.7	A	2.0	-0.5	3	T	7.0	1.1	F	2.0	0.0	3	T	1.0
4	I	II	2.0	200	S	1.1	I	0.6	-0.1	5	R	1.0	0.9	A	1.0	0.0	5	R	5.0	1.1	I	0.6	-0.1	5	R	1.0

Gradation Processing
- Rotation Amount (GA)
- Gradation Type (GT)
- Rotation Center (GC)
- Gradation Shifting Amount (GS)

Frequency Processing
- Frequency Rank (RN)
- Frequency Type (RT)
- Frequency Enhancement (RE)

[Test 1]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
	1	0900	SENSITIVITY		
	1	0901	SHARPNESS		
	1	0902	LINEARITY		
	1	0903	IMAGE-FORMAT		
	1	0904	CONTRAST		
	1	0905	MAX 0.5		
	1	0906	MAX 1.0		
	1	0907	MAX 2.0		
	1	0908	MAX 3.0		
	1	0909	MAX 4.0		
	1	090A	AVE 0.5		
	1	090B	AVE 1.0		
	1	090C	AVE 2.0		
	1	090D	AVE 3.0		
	1	090E	AVE 4.0		
	1	0910	SENSITIVITY HQ	Sensitivity for HQ image (50μ reading)	
	1	5900	AVE5CT08	This is to output images in 0.8 (GT:A) of density for Semi III (CT).	Auto V (Dmin = 1.0) using the Type II S_2 in the Auto Mode.
	1	5901	AVE5RT08	This is to output images in 0.8 (GT:A) of density for Semi III (RT).	Auto V (Dmin = 0.4) using the Type II S_2 in the Auto Mode.

EDR mode						Display Parameter																			
Auto		Semi		Fix	Preset	Two-image Display																			
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
-	V	I	1.0	200	S	1.0	A	1.2	0.0	3	F	5.0	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	0.0
-	V	I	1.0	200	S	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	0.0
-	V	I	3.0	200	F	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	5.0	1.0	A	1.2	0.0	3	F	0.0
-	V	I	1.0	200	S	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	5.0	1.0	A	1.2	0.0	3	F	5.0
-	V	I	2.0	200	S	1.3	C	1.2	0.0	3	R	0.0	1.3	C	1.2	0.0	3	R	3.0	1.3	C	1.2	0.0	3	R	0.0
-	IV	I	0.5	200	A	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	5.0	1.0	A	1.2	0.0	3	F	0.0
-	IV	I	1.0	200	A	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	5.0	1.0	A	1.2	0.0	3	F	0.0
-	IV	I	2.0	200	A	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	5.0	1.0	A	1.2	0.0	3	F	0.0
-	IV	I	3.0	200	A	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	5.0	1.0	A	1.2	0.0	3	F	0.0
-	IV	I	4.0	200	A	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	5.0	1.0	A	1.2	0.0	3	F	0.0
-	V	I	0.5	200	S	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	5.0	1.0	A	1.2	0.0	3	F	0.0
-	V	I	1.0	200	S	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	5.0	1.0	A	1.2	0.0	3	F	0.0
-	V	I	2.0	200	S	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	5.0	1.0	A	1.2	0.0	3	F	0.0
-	V	I	3.0	200	S	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	5.0	1.0	A	1.2	0.0	3	F	0.0
-	V	I	4.0	200	S	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	5.0	1.0	A	1.2	0.0	3	F	0.0
-	V	I	1.0	200	S	1.0	A	1.2	0.0	3	F	5.0	1.0	A	1.2	0.0	3	F	0.0	1.0	A	1.2	0.0	3	F	0.0
-	V	III(CT)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	V	III(RT)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0

Gradation Processing
- Rotation Amount (GA)
- Gradation Type (GT)
- Rotation Center (GC)
- Gradation Shifting Amount (GS)

Frequency Processing
- Frequency Rank (RN)
- Frequency Type (RT)
- Frequency Enhancement (RE)

[Test 2]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
	1	5902	AVE5RM08	This is to output images in 0.8 (GT:A) of density for Semi III (RM).	Auto V (Dmin = 0.2) using the Type II S_2 in the Auto Mode.
	1	5903	AVE5RB08	This is to output images in 0.8 (GT:A) of density for Semi III (RB).	Auto V (Dmin = 0.0) using the Type II S_2 in the Auto Mode.
	1	5904	AVE5CB08	This is to output images in 0.8 (GT:A) of density for Semi III (CB).	Auto V (Dmin = 0.6) using the Type II S_2 in the Auto Mode.
	1	5905	AVE5LB08	This is to output images in 0.8 (GT:A) of density for Semi III (LB).	Auto V (Dmin = 1.2) using the Type II S_2 in the Auto Mode.
	1	5906	AVE5LM08	This is to output images in 0.8 (GT:A) of density for Semi III (LM).	Auto V (Dmin = 1.4) using the Type II S_2 in the Auto Mode.
	1	5907	AVE5LT08	This is to output images in 0.8 (GT:A) of density for Semi III (LT).	Auto V (Dmin = 1.6) using the Type II S_2 in the Auto Mode.
	1	5908	AVE5CM08	This is to output images in 0.8 (GT:A) of density for Semi III (CM).	Auto V (Dmin = 0.8) using the Type II S_2 in the Auto Mode.
	1	6900	AVE5CT12	This is to output images in 1.2 (GT:A) of density for Semi III (CT).	Auto IV (Dmin = 1.8) using the Type II S_2 in the Auto Mode.
	1	6901	AVE5RT12	This is to output images in 1.2 (GT:A) of density for Semi III (RT).	Auto IV (Dmax = 1.2) using the Type II S_1 in the Auto Mode.
	1	6902	AVE5RM12	This is to output images in 1.2 (GT:A) of density for Semi III (RM).	Auto IV (Dmax = 1.0) using the Type II S_1 in the Auto Mode.
	1	6903	AVE5RB12	This is to output images in 1.2 (GT:A) of density for Semi III (RB).	Auto IV (Dmax = 0.8) using the Type II S_1 in the Auto Mode.
	1	6904	AVE5CB12	This is to output images in 1.2 (GT:A) of density for Semi III (CB).	Auto IV (Dmax = 1.4) using the Type II S_1 in the Auto Mode.
	1	6905	AVE5LB12	This is to output images in 1.2 (GT:A) of density for Semi III (LB).	Auto IV (Dmax = 2.0) using the Type II S_1 in the Auto Mode.
	1	6906	AVE5LM12	This is to output images in 1.2 (GT:A) of density for Semi III (LM).	Auto IV (Dmax = 2.2) using the Type II S_1 in the Auto Mode.
	1	6907	AVE5LT12	This is to output images in 1.2 (GT:A) of density for Semi III (LT).	Auto IV (Dmax = 1.0) using the Type II S_1 in the Auto Mode.
	1	6908	AVE5CM12	This is to output images in 1.2 (GT:A) of density for Semi III (CM).	Auto IV (Dmax = 1.6) using the Type II S_1 in the Auto Mode.
	1	7900	AVE5CT16	This is to output images in 1.6 (GT:A) of density for Semi III (CT).	Auto IV (Dmax = 1.8) using the Type I S_1 in the Auto Mode.
	1	7901	AVE5RT16	This is to output images in 1.6 (GT:A) of density for Semi III (RT).	Auto IV (Dmax = 1.2) using the Type I S_1 in the Auto Mode.

EDR mode						Display Parameter																			
Auto		Semi		Fix	Preset	Two-image Display																			
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
-	V	III(RM)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	V	III(RB)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	V	III(CB)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	V	III(LB)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	V	III(LM)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	V	III(LT)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	V	III(CM)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(CT)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(RT)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(RM)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(RB)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(CB)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(LB)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(LM)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(LT)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(CM)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(CT)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(RT)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0

Gradation Processing: Rotation Amount (GA), Gradation Type (GT), Rotation Center (GC), Gradation Shifting Amount (GS)
Frequency Processing: Frequency Rank (RN), Frequency Type (RT), Frequency Enhancement (RE)

[Test 3]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
	1	7902	AVE5RM16	This is to output images in 1.6 (GT:A) of density for Semi III (RM).	Auto IV (Dmax = 1.0) using the Type I S_1 in the Auto Mode.
	1	7903	AVE5RB16	This is to output images in 1.6 (GT:A) of density for Semi III (RB).	Auto IV (Dmax = 0.8) using the Type I S_1 in the Auto Mode.
	1	7904	AVE5CB16	This is to output images in 1.6 (GT:A) of density for Semi III (CB).	Auto IV (Dmax = 1.4) using the Type I S_1 in the Auto Mode.
	1	7905	AVE5LB16	This is to output images in 1.6 (GT:A) of density for Semi III (LB).	Auto IV (Dmax = 2.0) using the Type I S_1 in the Auto Mode.
	1	7906	AVE5LM16	This is to output images in 1.6 (GT:A) of density for Semi III (LM).	Auto IV (Dmax = 2.2) using the Type I S_1 in the Auto Mode.
	1	7907	AVE5LT16	This is to output images in 1.6 (GT:A) of density for Semi III (LT).	Auto IV (Dmax = 2.4) using the Type I S_1 in the Auto Mode.
	1	7908	AVE5CM16	This is to output images in 1.6 (GT:A) of density for Semi III (CM).	Auto IV (Dmax = 1.8) using the Type I S_1 in the Auto Mode.

EDR mode						Display Parameter																		
Auto		Semi		Fix	Preset	Two-image Display																		
						Left Image							Right Image							One-image Display						
PRIEF	Type	Type	Lfix	Sfix	mode	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE	GA	GT	GC	GS	RN	RT	RE
-	IV	III(RM)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(RB)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(CB)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(LB)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(LM)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(LT)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0
-	IV	III(CM)	2.0	200	S	1.0	E	1.6	-0.2	4	R	1.0	1.0	E	1.6	0.0	4	R	1.0	1.0	E	1.6	-0.2	4	R	1.0

Gradation Processing
- Rotation Amount (GA)
- Gradation Type (GT)
- Rotation Center (GC)
- Gradation Shifting Amount (GS)

Frequency Processing
- Frequency Rank (RN)
- Frequency Type (RT)
- Frequency Enhancement (RE)

[Dynamic Range Control Processing/Tomographic Artifacts Suppression Processing **1**]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Plain	1	0111	C-SPINE, LAT. (AP)	Observation of the cervical spine	
	1	0200	CHEST, GENREAL (PA)	Plain thoracic exposure; observation of the lung field and mediastinum for shadows	
	1	0202	RIBS, UPPER (AP)	Observation of the superior ribs	
	1	0209	T-SPINE, LAT. (AP)	Observation of the thoracic and cervicothoracic spine (this menu is used only when the enface radiogram is different in density from the oblique radiogram in particular)	
	1	020A	STERNUM, LATERAL (AP)	Exposure of thoracic soft parts; observation of the chest wall, axilla, and other sites	
	1	020B	SHOULDER (AP)	Observation of the frontal and peripheral soft parts of the shoulder joint	
	1	0212	RIB, UPPER OBL. (AP)	Observation of the superior ribs oblique	
	1	0230	CHEST, LATERAL (PA)	Plain thoracic exposure; observation of the lung field and mediastinum for shadows (this menu is used only when the enface radiogram is different in density from the oblique radiogram in particular)	
	1	0240	CHEST, AP NON-GRID (PA)	Plain thoracic exposure; observation of the lung field and mediastinum for shadows without grid	
	1	0250	CHEST, PORTABLE (PA)	Plain thoracic exposure; observation of the lung field and mediastinum for shadows for portable	
	1	0260	CHEST, DECUB. (PA)	Plain thoracic exposure; observation of the lung field and mediastinum for shadows for decubitus	
	1	0280	CHEST, AP (GRID) (AP)	Plain thoracic exposure; observation of the lung field and mediastinum for shadows with grid	
	1	0500	PELVIS, GENERAL (AP)	Observation of the pelvis, ilium, and peripheral soft parts	
	1	0508	HIP JOINT (AP)	Observation of the hip joint (Use the FIX MODE when protector is used.)	
	1	0510	PELVIS, PORTABLE (AP)	Observation of the pelvis, ilium, and peripheral soft parts for portable	
	1	0511	LUMBER, LATERAL (AP)	Observation of the lumbar and thoracolumbar spine for lateral	
	1	0518	FEMUR, PROXIMAL (AP)	Observation of femure	
	1	0521	SWIMMERS (AP)	Observation of shoulder joint at SWIMMERS technique	

EDR mode						Display Parameter																	
Auto		Semi		Fix	Preset	Two-image Display																	
						Left Image						Right Image						One-image Display					
PRIEF	Type	Type	Lfix	Sfix	mode	DRN	DRT	DRE	ORN	ORT	ORE	DRN	DRT	DRE	ORN	ORT	ORE	DRN	DRT	DRE	ORN	ORT	ORE
4S	II	II	2.4	200	A	2	C	0.5	5	1	0.0	2	C	0.5	5	1	0.0	2	C	0.5	5	1	0.0
4S	II	IV	2.2	200	A	2	B	0.6	5	1	0.0	2	B	0.0	5	1	0.0	2	B	0.6	5	1	0.0
4S	II	II	2.2	200	A	2	B	0.5	5	1	0.0	2	B	0.5	5	1	0.0	2	B	0.5	5	1	0.0
4S	VI	II	2.2	200	A	2	C	0.6	5	1	0.0	2	C	0.6	5	1	0.0	2	C	0.6	5	1	0.0
-	IV	II	2.6	200	A	2	C	0.5	5	1	0.0	2	C	0.5	5	1	0.0	2	C	0.5	5	1	0.0
4S	VII	II	2.2	200	A	2	G	0.5	5	1	0.0	2	G	0.5	5	1	0.0	2	G	0.5	5	1	0.0
4S	II	II	2.2	200	A	2	B	0.5	5	1	0.0	2	B	0.5	5	1	0.0	2	B	0.5	5	1	0.0
4S	II	IV	2.2	200	A	2	B	0.6	5	1	0.0	2	B	0.6	5	1	0.0	2	B	0.6	5	1	0.0
4S	II	IV	2.2	200	A	2	B	0.6	5	1	0.0	2	B	0.6	5	1	0.0	2	B	0.6	5	1	0.0
4S	II	IV	2.2	200	A	2	B	0.6	5	1	0.0	2	B	0.6	5	1	0.0	2	B	0.6	5	1	0.0
4S	II	IV	2.2	200	A	2	B	0.6	5	1	0.0	2	B	0.6	5	1	0.0	2	B	0.6	5	1	0.0
4S	II	II	2.0	200	A	2	G	0.5	5	1	0.0	2	G	0.5	5	1	0.0	2	G	0.5	5	1	0.0
4S	II	II	2.0	200	A	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0
4S	II	II	2.0	200	A	2	G	0.5	5	1	0.0	2	G	0.5	5	1	0.0	2	G	0.5	5	1	0.0
4S	II	II	2.0	200	A	2	E	0.5	5	1	0.0	2	E	0.5	5	1	0.0	2	E	0.5	5	1	0.0
4S	II	II	2.0	200	A	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0
4S	II	II	2.0	200	A	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0

DRC Processing rank (DRN)
Processing type (DRT)
Processing degree of enhancement (DRE)
TAS Processing rank (ORN)
Processing type (ORT)
Processing degree of enhancement (ORE)

[Dynamic Range Control Processing/Tomographic Artifacts Suppression Processing 2]

Technique	Level	Menu Code	Menu (PA) : Right-to-left reversed output	Applicable projection method and observation site	Remarks
Plain	1	0600	HUMERUS (AP)	Observation of the humerus, its soft part, and the elbow joint	
	1	0601	FOREARM (AP)	Observation of the antebrachial bone, its soft part, and the wrist joint	
	1	0606	HAND (AP)	Observation of the metacarpal bone and peripheral soft parts	
	1	0607	FINGER (AP)	Observation of the phalanges and peripheral soft parts	
	1	0610	ELBOW (AP)	Observation of the elbow	
	1	0611	WRIST (AP)	Observation of wrist and wrist joint	
	1	0616	HAND, LATERAL (AP)	Observation of hand lateral	
	1	0700	FEMUR, DISTAL (AP)	Observation of the femoral bone, soft tissues and the knee (It should be noted however that knee joint observation by axial projection is excluded.)	
	1	0701	TIB/FIB (AP)	Observation of the crural bone and soft part	
	1	0706	FOOT (AP)	Observation of the foot, articulation, tarsal bone, and calcaneus by axial projection	
	1	0707	TOES (AP)	Observation of the toe and phalanges	
	1	070B	KNEE, SUNRISE (AP)	Patellar exposure by axial projection	
	1	0711	ANKLE (AP)	Observation of the ankle joint	
	1	0716	FOOT, LATERAL (AP)	Observation of the foot, articulation, tarsal bone, and calcaneus by axial projection for lateral position	
	1	0710	KNEE, AP/OBL (AP)	Observation of the knee joint	
	1	0720	KNEE, LATERAL (AP)	Observation of the knee joint for lateral position	
Tomography	1	2200	LUNG : T (PA)	Mainly tomography of the lung field; observation of the lung field and rib	
Magnification	1	0300	BREAST (PA)	Observation of the whole breast Available for other exposures including spot exposure	Use the Mo bulb.

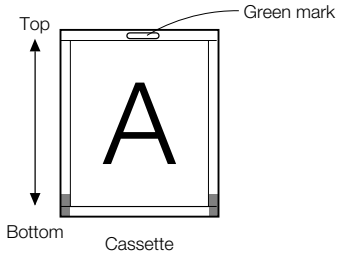
EDR mode						Display Parameter																	
Auto		Semi		Fix	Preset	Two-image Display																	
						Left Image						Right Image						One-image Display					
PRIEF	Type	Type	Lfix	Sfix	mode	DRN	DRT	DRE	ORN	ORT	ORE	DRN	DRT	DRE	ORN	ORT	ORE	DRN	DRT	DRE	ORN	ORT	ORE
4S	I	III	2.0	200	A	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0
4S	I	III	2.0	200	A	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0
4S	I	III	2.0	200	A	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0
4S	I	III	2.0	200	A	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0
4S	I	III	2.0	200	A	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0
4S	I	III	2.0	200	A	2	G	0.4	5	1	0.0	2	G	0.4	5	1	0.0	2	G	0.4	5	1	0.0
4S	I	III	2.0	200	A	2	F	0.3	5	1	0.0	2	F	0.3	5	1	0.0	2	F	0.3	5	1	0.0
4S	I	III	2.0	200	A	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0
4S	I	III	2.0	200	A	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0
4S	VI	III	2.0	200	A	2	E	0.5	5	1	0.0	2	E	0.5	5	1	0.0	2	E	0.5	5	1	0.0
4S	I	III	2.0	200	A	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0
-	IV	III	2.6	200	A	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0
4S	I	III	2.0	200	A	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0
4S	I	III	2.0	200	A	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0
4S	I	III	2.0	200	A	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0	2	F	0.5	5	1	0.0
4S	I	III	2.0	200	A	2	E	0.5	5	1	0.0	2	E	0.5	5	1	0.0	2	E	0.5	5	1	0.0
1	II	IV	2.2	200	A	5	A	0.0	4	0	3.0	5	A	0.0	4	0	0.0	5	A	0.0	4	0	3.0
2	I	I	1.8	40	A	8	E	1.0	5	1	0.0	8	E	0.0	5	1	0.0	8	E	1.0	5	1	0.0

DRC Processing rank (DRN)
Processing type (DRT)
Processing degree of enhancement (DRE)
TAS Processing rank (ORN)
Processing type (ORT)
Processing degree of enhancement (ORE)

Appendix **Z**

Precautions for Exposure

It is recommended to use Bucky's device to remove scatter lines and obtain a high quality image. When carrying out exposure using a stationary grid, it is recommended to use a 60 grids/cm grid with fewer artifacts. However, it is also possible to use 80 grids/cm for 8 x 10" IP.



1 Precautions for Exposure in the AUTO MODE

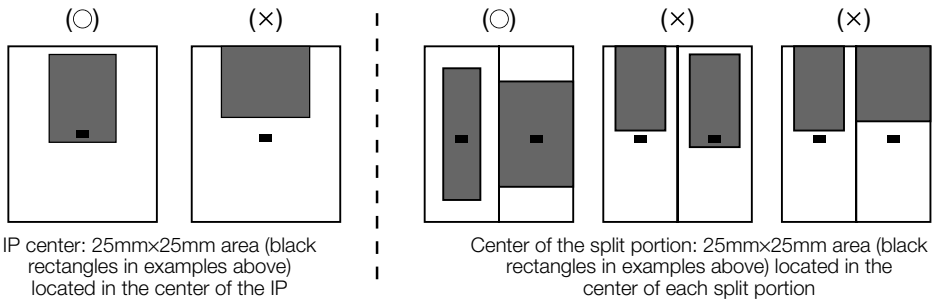
In the AUTO MODE, stable image output can be obtained by means of the following.

(1) Radiation field and IP split pattern recognition (PRIEF)
(2) Detailed depiction of the cervical region
(3) EDR image data analysis

However, problems may arise due to differences in multiple diaphragm or scattered rays of the X-ray equipment. For such problems, contact our service engineer and use such other recording modes as the SEMI-AUTO MODE or FIX MODE.

1.1 Radiation Field and IP Split Pattern Recognition

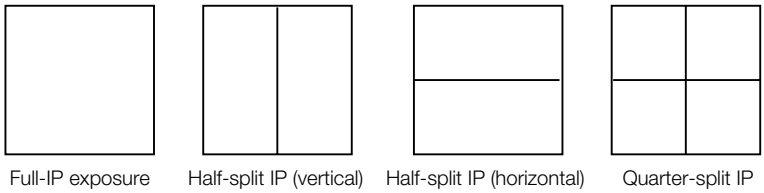
1 Be sure that the center (25 × 25mm) of the IP is in the radiation field. If the IP is split for multiple exposures, each center of the split portions must be covered by the radiation field.


(○)
(×)
(○)
(×)
(×)
IP center: 25mm×25mm area (black rectangles in examples above) located in the center of the IP
Center of the split portion: 25mm×25mm area (black rectangles in examples above) located in the center of each split portion

2 Do not set the radiation field extremely small. Be sure to expose X-rays on one thirds or more of the length of each side of the IP.

3 Be sure that each side of the radiation field does not overlap with the contrast medium. Error will occur if they overlap each other.

4 The IP split pattern recognition is as follows. "S" in PRIEF4S or 1S is a mark showing that the IP split recognition is possible.



* For multiple exposures with a split IP, split portion(s) can be left unexposed. (Only when using PRIEF 4S or 1S.)

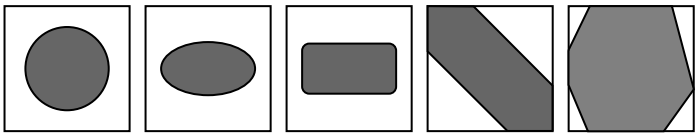
[Table. Z-1] Available for Each Anatomical Region/Method

	Plain	Contrast Medium	Tomography
Head	4S	4S	4S (1 for pantomography)
Neck	4S	4S	1S
Chest	4S	4S (1 for esophagus)	1
Abdobem	4S	4S (1S for stomach and intestines)	1
Pelvis	4S	4S	1
Upper extremity	4S	4S	1
Lower extremity	4S	4S	1

5 Notes on PRIEF

[PRIEF 4S] Used, with some exceptions, for both plain and contrast medium exposure menus, from head to lower extremities.

(1) The diaphragm shape will be any convex polygons including rectangle, circle, ellipse, track, etc.

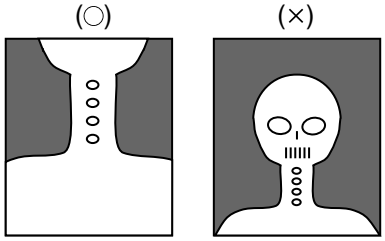


[PRIEF 2] Used to neck tomography and stomach contrast medium menus.

(1) When the IP is not split and the diaphragm is closed, adjust the shape so that it is parallel to the IP side.

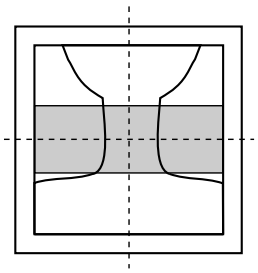
1.2 Depiction of the Cervical Region

1 The radiation field must not include the whole head. Be sure to secure transparent portions on both sides of the neck.

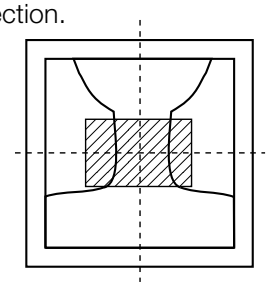


Use the “Skull, General” menu to include the whole head in the radiation field.

2 For exposure of the pharynx and/or larynx, be sure that the neck comes to the center of the radiation field, especially in terms of upper and lower margins.



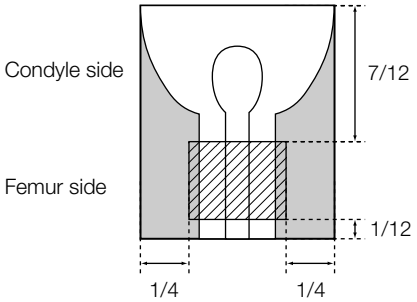
3 In pharynx and/or larynx exposure, do not use lead characters in the oblique line section.



1.3 Depiction of HIP JOINT AXL - 2

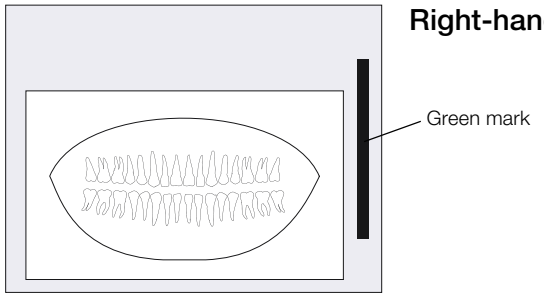
1 Make sure to position the region of interest to the slanted-line area shown below. Do not collimate further inside.

2 Positioning should be done so that the condyle and the femur run along the longer edge. (Do not have them positioned against the shorter edge.)



1.4 Precautions for "Panorama" X-ray Exposures

1 To obtain properly displayed images, set the 10"x12" cassette in the dedicated cassette holder of the exposure unit so that the green mark on top of the cassette is positioned on the right-hand side when viewed from the X-ray tube, as illustrated below.



10″×12″ cassette

2 For image output, the "Panorama" X-ray exposure menu (M2004) takes only an area of 15×30cm from the 10″×12″ exposure area.
If you wish an image be output using the entire 10″×12″ area, use the "Panorama-2" (7004) exposure menu.

1.5 EDR Image Data Analysis

1 Image unevenness appearing when the grid used for exposure is not correctly positioned in terms of the bulb, clothes shadow or unevenly radiated X-ray to the X-ray exposure area can be referred to as the problems occurring during the EDR image data analysis, which cause unstable density on the image. Avoid such unevenness in the X-ray exposure area as far as possible.

2 If the target includes such materials as gypsum, denture, etc., stable density may not be obtained because such materials make it difficult to analyze EDR image data. In such a case, use the S-Shift/C-Shift or FIX MODE.

3 For multiple exposures with a split IP, make exposure doses on each portion of the IP as equal as possible (maximum 1.6 times). In other words, for multiple exposures, submit each portion of the IP to the appropriate exposure dose according to the intended anatomical region as usual.

4 Precautions when using the AUTO MODE.

Auto mode	Precautions
I	As this mode is available on the assumption that it extracts information concerning the skin, secure the positioning so that there is an area other than the target where the direct X-rays are incident.
II	No special precautions
III	Be sure to use the Ba contrast medium.
IV	1 Be sure to secure the positioning so that the X-rays are incident directly in the area outside the target. 2 As the reading latitude is fixed, it is necessary to control the tube voltage as usual according to the thickness of the target.
V	As the reading latitude is fixed, it is necessary to control the tube voltage as usual according to the thickness of the target.
VI	No special precautions
VII	No special precautions

2 Precautions for Exposure in the SEMI-AUTO MODE

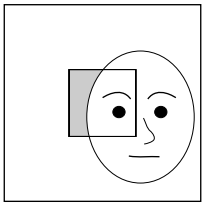
The precautions are common to Semi I, II, III or III(**).

1 Center area of the IP 10 × 10cm (Semi I)
7 × 7cm (Semi II)
5 × 5cm (Semi III)

Position the portion you need to display often in each of the 5 × 5cm center areas of the half-split IPs (both upper and lower halves and right and left halves) and the quarter-split IP.

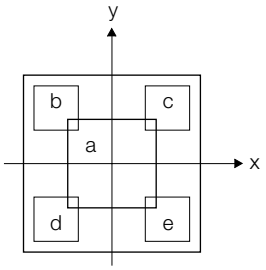
2 Never position anything other than the subject in the above mentioned areas. If anything other than the subject is positioned in such areas, the image density will become thinner.

In addition, do not position any metals or artificial bones in such areas. The image density will become higher if such an object is positioned in such areas.



(×)

3 It is necessary to control the tube voltage as usual according to the subject thickness. The following precautions should be observed for Semi IV.



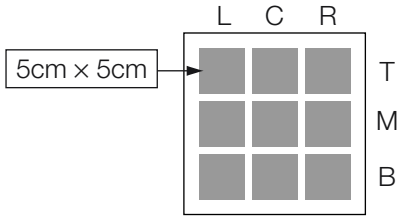
Area	Center Coordinate (x:y) cm	Size (cm)
a	(0, 0)	10×10
b	(-5, 7)	6×6
c	(5, 7)	6×6
d	(-5, -7)	6×6
e	(5, -7)	6×6

(1) Do not position transparent portions (area other than the subject) in the abovementioned five areas.
(2) It is necessary to control the tube voltage as usual according to the subject thickness.

The SEMI-AUTO MODE has been preset around the magnification menu. For details, refer to Appendix Y Exposed Anatomical Regions / Applicable Menus / Display Parameter.

3 Precautions for Exposure in SEMI-X MODE

The user will select the nine areas accordingly, on which SEMI-AUTO MODE applies.
(See the illustration below.)
The same precautions as for SEMI-AUTO MODE apply.



4 Precautions for Exposure in FIX MODE

As reading conditions are fixed, exposure conditions must be controlled in the same way as for conventional X-ray exposure.
The reading conditions (sensitivity and latitude) have been preset according to the relevant menu in FIX MODE. Thus, select the exposure conditions that correspond to that menu.

During maintenance and inspection, strictly observe precautions contained in **"1.2 Operational Precautions" (page 1-3)** and **"1.3 Safety Precautions" (page 1-7)** in this manual for you to use the FCR 5000 plus system under best conditions.

1 User's Maintenance and Inspection Items

1.1 Daily Inspection

(1) Inspection Before Use

- Make sure that the equipment starts up normally.
- Make sure that the equipment communicates with connected devices normally.
  ➡ **Figures 2.1 to 2.3 in "2.1.1 Starting Up the System" (page 2-2)**

(2) Inspection During Use

- Make sure that the equipment handles cassettes normally.
  ➡ **"2.2 Routine Operations" (page 2-5)**
- Make sure that the cassette opens / closes and locks normally.
- Make sure that images are output normally.
  If any failures, such as transparent images etc., result, clean the equipment.
  ➡ **"2.3 Cleaning" (page B-3)**

(3) Inspection After Use

- Make sure that the power turns OFF normally after the equipment has been shut down.
  ➡ **Figure 2.4 in "2.1.2 Shutting Down the System" (page 2-3)**

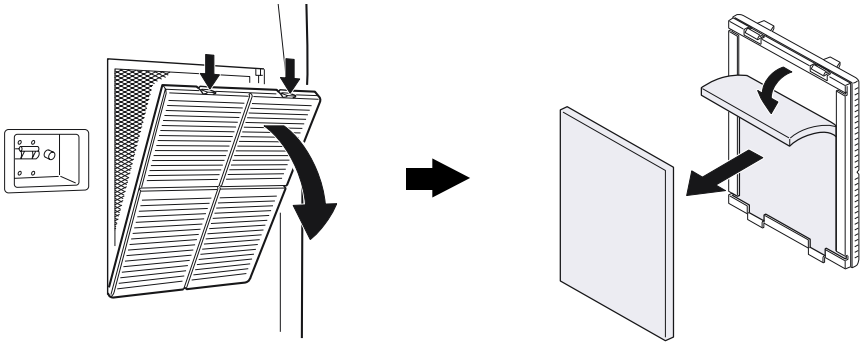
1.2 Periodical Inspection

Using a vacuum cleaner, remove any dirt or dust accumulated in each unit of the equipment once every three months. Clean then with a slightly moistened soft cloth and wipe off any moisture with a dry cloth.

➡ **Figure 1.1 in "1.4 Hardware Configuration" (page 1-8)**

No.	Unit for Cleaning	No.	Unit for Cleaning
1	Main unit cover	4	Cassette setting unit
2	Image monitor	5	Air filter
3	Operation panel	6	Periphery of devices

The air filter on the right side of the equipment can be removed as an assembly, together with the filter cover. Remove first the cover and then the air filter (sponge) fit in the cover. Clean them using a vacuum cleaner.



!! Be sure to turn the equipment power OFF before cleaning the filter.

2 Maintenance and Inspection Items Assigned to Specified Dealer

For periodical inspection of the equipment and necessary arrangements, consult our official dealer, Fujifilm Medical Systems representatives of each region.

European Authorized Representative :
FUJI PHOTO FILM (Europe) GmbH
Heesenstrasse 31, D-40549 Düseldorf Germany

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419 WEST AVENUE, STAMFORD CT 06902, U.S.A.